KULSAWASD "BO" JITKAJORNWANICH, Ph.D.
[pronounced as *"kun-swat "bo" jit-kjorn-wa-nid"*]
Assistant Professor · College of Media and Communication
Texas Tech University
2500 Broadway W, Lubbock, TX 79409
Office: (+1) 806 834 2010, Cell: (+1) 682 414 9164
E-mail: kulsawasd.jitkajornwanich@ttu.edu; kulsawasdj@hotmail.com
Homepage: www.jitkajornwanich.com

EDUCATION:

2014 ***Dept. of Computer Science & Engineering, College of Engineering, The University of Texas at Arlington***, Arlington, Texas, United States
Ph.D. in Computer Science (GPA: 4.00/4.00)
Dissertation: "Analysis and Modeling Techniques for Geo-Spatial and Spatio-Temporal Datasets"
Received the dissertation award in the 'Information Technology and Communication Arts' category, by The National Research Council of Thailand (NRCT) (Thai equivalent of the US NSF).

2009 ***Dept. of Computer Science & Engineering, College of Engineering, The University of Texas at Arlington***, Arlington, Texas, United States
M.S. in Computer Science (GPA: 3.87/4.00)
Specialization: Database and Artificial Intelligence

2004 ***Dept. of Mathematics & Computer Science, Faculty of Science, Chulalongkorn University***, Bangkok, Thailand
B.S. in Computer Science (GPA: 3.34/4.00)
Senior Project: "Teaching Mathematics with Animation on Theory of Sine and Cosine," implemented with Macromedia Flash (now Adobe Animate)
Graduated with honors, equivalent to Magna Cum Laude distinction

WORK EXPERIENCES:

2023- **Assistant Professor**, *Dept. of Professional Communication, College of Media & Communication, Texas Tech University, Lubbock, TX, USA*

2019 –23 **Assistant Professor**, *Dept. of Computer Science, Faculty of Science, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand*
[Click Here to Watch Introduction Video on YouTube]
- Head of Data Science & Computational Intelligence (DSCI) Lab

2016-19 **Lecturer**, *Dept. of Computer Science, Faculty of Science, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand*

2014-16 **Researcher,** *Geo-Informatics & Space Technology Development Agency (Thai equivalent of US NASA), Ministry of Higher Education, Science, Research and Innovation of Thailand*

2014 **Teaching Assistant**, *Dept. of Computer Science & Engineering, UT-Arlington, Texas, USA*

2013 **Course Instructor**, *Dept. of Computer Science & Engineering, UT-Arlington, Texas, USA*

2011-13 **Graduate Research Assistant**, *UT-Arlington, Texas, USA*
- Worked on a collaboration project between UTA and US National Weather Service (NOAA – WGRFC)/Tarrant Regional Water District (TRWD) to develop a flood forecasting system for North Texas

2009-10 **Instructor/Tutor**, *TRiO/Upward Bound Pre-College Programs, UT-Arlington, Texas, USA*
- Coached high school students in North Texas areas for the 2010 Annual Academic Bowl Competition (ABC'10); one African American student

(Brenton Grigsby) won the 2nd prize in the Mathematics category

2006 **Database Developer**, *Thomson Reuters Ltd., London, England*
- Worked at Reuters headquarters in Canary Wharf, London in managing, tuning, and scripting databases for news and journalism data of the project

2005 **Software Engineer**, *Thomson Reuters Ltd., Bangkok, Thailand*
- Worked in a software division of the company. Developed software for news and journalism data as well as conducted training sessions incl. Oracle XML Database Fundamentals

2004 **Webmaster**, *Bangkok Bank Public Company Ltd. (The Largest Bank in Thailand), Thailand*
- Designed, developed, and administered the Bangkok Bank internal website for internal organizational communication

PUBLICATIONS (n=59)

* indicates undergraduate students, and ~ indicates graduate students.
Google Scholar Citation Count = ~800, h-index = 14, i10-index = 21

Journal Articles (n=18)

[1] Yanes, N. A., **Jitkajornwanich, K.**, Kee, K. F., & Perlmutter, D. D. (2026). The Original Sins of Algorithmic Authenticity Verification: Provenance Neglect and Model Collapse in AI-Mediated News and Information. Journal of Broadcasting & Electronic Media, 1–21. *[Taylor & Francis; 5-Year Impact Factor: 3.9]*

[2] Chaiyana, A., **Jitkajornwanich, K.**, Prompol, K.~, Phoesri, T., Hurst, Z., & Jagadish, S. K. (2026). AI-driven deep learning framework for long-term monitoring of playa wetland hydrological landscape in west Texas. Environmental Technology & Innovation, 43, 105012. *[Elsevier; Impact Factor = 7.3 (2025)]*

[3] **Jitkajornwanich, K.**, & Kee, K. (2025). Smart Alerts for Complex Risks: A Dual-Risk Framework for Understanding AI-Driven Crisis Communication in the Computational Age. Mediascapes journal, 26(2), 92-117.

[4] Thanyakunsajja, N.~, **Jitkajornwanich, K.**, Xu, S., Shin, D., & Charoenporn, P. (2025). "Early Diagnosis of Knee Osteoarthritis With a Natural Language Processing–Driven Approach Based on Clinician Notes: Development and Validation Study." JMIR Formative Research, vol. 9, e64536. *[JMIR Publications; Impact Factor = 2.1]*

[5] Shin, D., Perlmutter, D., Lim, J.S., & **Jitkajornwanich, K.** (2025) "Fact-Checking as Epistemic Infrastructure: From Journalistic Gatekeeping to Platform Governance." Emerging Media. *[Sage]*

[6] Xu, S., **Jitkajornwanich, K.**, David, P., Park, H. J., Zhao, Y., Adu, J., & Chumthong, T.~ (2024). "A longitudinal examination of collaboration diversity among communication scholars: 1990–2023." Journal of Communication (JOC), 74(6), 466-480. *[Oxford University Press (ICA); 5-year Impact Factor = 7.4]*

[7] **Jitkajornwanich, K.**, Vijaranakul, N.~, Jaiyen, S., Srestasathiern, P., & Lawawirojwong, S. (2024). "Enhancing Risk Communication and Environmental Crisis Management through Satellite Imagery and AI for Air Quality Index Estimation," *MethodsX*, 12, 102611. *[Elsevier; 5- year Impact Factor = 2.1]*

[8] Vajeethaveesin, T.~, Panboonyuen, T.~, Lawawironjwong, S., Srestasathiern, P. & **Jitkajornwanich, K.** (2022). "A Performance Comparison between GIS-based and Neuron Network Methods for Flood Susceptibility Assessment in Ayutthaya Province," *Trends in Sciences*, 19(2), 2038. *[indexed by Scopus, SJR Q3:0.15]*

[9] Chansuparp, M.~, **Jitkajornwanich, K.** (2022). "LifeGuard: An Improvement of Actor-Critic Model with Collision Predictor in Autonomous UAV Navigation," *Applied Artificial Intelligence*, vol. 36 (1). *[Taylor & Francis Impact Factor: 2.777 (Q2, 2021)]*

[10] Chansuparp, M.~, **Jitkajornwanich, K.** (2022). "A Novel Augmentative Backward Reward Function with Deep Reinforcement Learning for Autonomous UAV Navigation," *Applied*

Artificial Intelligence, vol. 36 (1), 2084473. *[Taylor & Francis; Impact Factor: 2.777 (Q2, 2021)]*

[11] Panboonyuen, T.~, **Jitkajornwanich, K.**, Lawawirojwong, S., Srestasathiern, P. & Vateekul, P. (2021). "Transformer-Based Decoder Designs for Semantic Segmentation on Remotely Sensed Images," *Remote Sensing Journal*, vol. 13(24). *[Impact Factor: 5.353 (2020)]*

[12] Kee, K.F., Le, B., & **Jitkajornwanich, K.** (2021). "If You Build It, Promote It, and They Trust You, Then They Will Come: Diffusion Strategies for Science Gateways and Cyberinfrastructure Adoption to Harness Big Data in the STEM Community," *Concurrency and Computation: Practice and Experience*. *[John Wiley & Sons Ltd.; Impact Factor: 1.447]*

[13] Panboonyuen, T.~, **Jitkajornwanich, K.**, Lawirojwong, S., Srestasathiern, P., Vateekul, P. (2020). "Semantic Labeling in Remote Sensing Corpora Using Feature Fusion-Based Enhanced Global Convolutional Network with High-Resolution Representations and Depthwise Atrous Convolution," *Remote Sensing Journal*, vol. 12(8). *[Impact Factor: 5.353 (2020)]*

[14] **Jitkajornwanich, K.**, Pant, N., Fouladgar, M., & Elmasri, R. (2020). "A Survey on Spatial, Temporal and Spatio-Temporal Database Research and an Original Example of Relevant Applications Using SQL Ecosystem and Deep Learning," *Journal of Information and Telecommunication. [Taylor & Francis, indexed by ASEAN Citation Index]*

[15] Panboonyuen, T.~, **Jitkajornwanich, K.**, Lawawirojwong, S., Srestasathiern, P., Vateekul, P. (2019). "Semantic Segmentation on Remotely Sensed Images Using an Enhanced Global Convolutional Network with Channel Attention and Domain Specific Transfer Learning," *Remote Sensing Journal*, vol. 11(1). *[Impact Factor: 5.353 (2020)]*

[16] Teerakawanich, N., Kasemsuwan, V., **Jitkajornwanich, K.**, Kanokbannakorn, W., Srisonphan, S. (2018). "Micro Corona Discharge-Mediated Non Thermal Atmospheric Plasma for Seed Surface Modification," *Plasma Chemistry and Plasma Processing Journal*, vol. 38(4). *[Springer Nature Switzerland; Impact Factor: 2.768 (2018)]*

[17] Srisonphan, S., **Jitkajornwanich, K.** (2018). "Nearly Ballistic Electron Transport in an Out-of-Plane Nanoscale Defect-Void Channel," *IEEE Transactions on Electron Devices*, vol. 65(6) *[IEEE; Impact Factor: 2.704 (2018)]*

[18] Panboonyuen, T.~, **Jitkajornwanich, K.**, Lawawirojwong, S., Srestasathiern, P., Vateekul, P. (2017). "Road Segmentation of Remotely-Sensed Images Using Deep Convolutional Neural Networks with Landscape Metrics and Conditional Random Fields," *Remote Sensing Journal*, vol. 9(7). *[Impact Factor: 5.353 (2020)]*

Conference Proceedings Papers (n=33)

[1] **Jitkajornwanich, K.**, Kee, K., & Kraishan, O.~ (2026, in-press). From Early Flood Warning to Digital Governance Resilience: AI- Enabled Smart Alerts. DG.O. 2026–The 27th Annual International Conference on Digital Government Research, June 1-4, 2026, Omaha, NE, USA.

[2] Goni, M. A., **Jitkajornwanich, K.**, Calyam, P., & Kee, K. F. (2026, in-press). Is your science gateway ready for the AI age? Communication strategies for sustainable adoption and diffusion for science gateways. Science Gateways 2026 Conference, September 23–25, Washington, DC, United States., Proceedings of Science Gateways 2026, Washington, DC, USA.

[3] Hasan, M.~, Kee, K. F., Deelman, E., Santillana, M., **Jitkajornwanich, K.**, & McNaughtan, J. (2026, in-press). AI readiness as a community accomplishment: Communities of practice and sustainable science gateways. Science Gateways 2026 Conference, September 23–25, Washington, DC, United States., Proceedings of Science Gateways 2026, Washington, DC, USA.

[4] Prompol, K.~, Jansong, U.~, & **Jitkajornwanich, K.** (2025, May). Identifying Common Themes and Persuasive Elements in Healthcare Customer Reviews. In 2025 IEEE/ACIS 23rd International Conference on Software Engineering Research, Management and Applications

(SERA) (pp. 327-333). IEEE.

[5] Udomwisanpat, P.~, **Jitkajornwanich, K.**, Kraishan, O., Srestasatheirn, P., Lawawirojwong, S., & Charoenporn, P. (2025). Visualizing political communication trends across generations on X (Twitter): Insights through topic modeling and word clouds. In 2024 23rd IEEE/WIC International Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT). IEEE. *[indexed by Web of Science Core Collection]*

[6] Chumthong, T.~, **Jitkajornwanich, K.**, Kraishan, O., Kee, K. F., & Narabin, A. (2024, December). "Leveraging Race Prediction Algorithms to Enhance Team Composition in Big Data Science Teams". In 2024 IEEE International Conference on Big Data (BigData) (pp. 3105-3113). IEEE. [indexed by Web of Science]

[7] Siriket, L.~, **Jitkajornwanich, K.**, Jaiyen, S., Intakosum, S. (2024). "Improving the Word Error Rate of OpenAI's Whisper Model in Transcribing Thai Homophones in the Context of Legal News," Proceedings of the 10th International Conference on Engineering, Applied Sciences and Technology (ICEAST 2024), Luang Prabang, Laos. [indexed by Web of Science]

[8] Kongthong, C.~, **Jitkajornwanich, K.**, Intakosum, S. (2024). "Unleashing Insights: Harnessing Big Unstructured Data through Text Analysis to Drive Decision-Making with Analysis and Visualization Framework," Proceedings of the 12th International Electrical Engineering Congress (iEECON 2024), Thailand [indexed by Web of Science]

[9] Kee, K. F., Olshansky, A.~, Xu, S., & **Jitkajornwanich, K.** (2023). "A Capacity Framework of Community Readiness for Supporting Big Data Science Projects during Cyberinfrastructure Diffusion," Proceedings of the 2023 IEEE International Conference on Big Data (BigData) (pp. 2405-2410). IEEE. [indexed by Web of Science]

[10] Thananukhun, K.~, Jaiyen, S., **Jitkajornwanich, K.**, & Hanskunatai, A. (2023). "Question Classification for Thai Conversational Chatbots Using Artificial Neural Networks and Multilingual BERT Models", Proceedings of the 15th International Conference on Knowledge and Smart Technology (KST 2023), Phuket, Thailand. [indexed by Scopus]

[11] Vijaranakul, N.~, Jaiyen, S., Srestasathiern, P., Lawawirojwong, S., **Jitkajornwanich, K.** (2020). "Air Quality Assessment Based on Landsat 8 Images Using Supervised Machine Learning Techniques", *Proceedings of The 17th International Conference on Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology (ECTI-CON 2020)*, Thailand. *[indexed by Scopus]*

[12] Jenbanphue, T., Hongesombut, K., **Jitkajornwanich, K.**, & Srisonphan, S. (2020, March). Electrostatic Properties and Ions Elimination Effect of Polyvinyl Chloride (PVC) Adhesive Tape Manufacturing. In 2020 8th International Electrical Engineering Congress (iEECON) (pp. 1-4). IEEE. [indexed by Web of Science Core Collection]

[13] Le, B.~, Escalera, F.~, **Jitkajornwanich, K.**, Kee, K.F. (2019). "External Communication to Diffuse Science Gateways and Cyberinfrastructure as Innovations for Research with Big Data", Proceedings of Science Gateways 2019, CA, USA.

[14] Grodniyomchai, B.~, Chalapat, K., **Jitkajornwanich, K.**, Jaiyen, S. (2019). "A Hybrid of Shallow and Deep Learning for Odor Classification Based on Adaptive Boosting", Proceedings - 9th IEEE International Conference on Control System, Computing and Engineering, ICCSCE, Penang, Malaysia. [indexed by Scopus]

[15] Grodniyomchai, B.~, Chalapat, K., **Jitkajornwanich, K.**, Jaiyen, S. (2019). "A Deep Learning Model for Odor Classification Using Deep Neural Network", Proceedings of the 5th International Conference on Engineering, Applied Sciences and Technology (ICEAST 2019), Luang Prabang, Laos. [indexed by Scopus]

[16] Thongniran, N.~, Vateekul, P., **Jitkajornwanich, K.**, Lawawirojwong, S., Srestasathiern, P. (2019). "Spatio-Temporal Deep Learning for Ocean Current Prediction Based on HF Radar Data", *Proceedings of the 2019 16th International Joint Conference on Computer Science and Software Engineering*, Thailand. *[indexed by Web of Science Core Collection]*

[17] Thongniran, N.~, **Jitkajornwanich, K.**, Lawawirojwong, S., Srestasathiern, P., Vateekul, P. (2019). "Combining Attentional CNN and GRU Networks for Ocean Current Prediction

based on HF Radar Observations", *Proceedings of the 2019 8th International Conference on Computing and Pattern Recognition, ICCPR '19*, Beijing, China. *[indexed by Scopus]*

[18] Chansuparp, M.˜, **Jitkajornwanich, K.** (2019). "Moving Object Detection Using Integrated Spatial and Motion-Based Method", *Proceedings of the 2019 16th International Joint Conference on Computer Science and Software Engineering*, Thailand. *[indexed by Web of Science Core Collection]*

[19] **Jitkajornwanich, K.**, Kongthong, C.*, Khongsoontornjaroen, N.*, Kaiyasuan, J.*, Lawawirojwong, S., Srestasathiern, P., Srisonphan, S., Vateekul, P. (2018). "Utilizing Twitter Data for Early Flood Warning in Thailand", Proceedings of the 2018 IEEE International Conference on Big Data (IEEE BigData 2018), Seattle, WA. *[indexed by Web of Science Core Collection]*

[20] Teerakawanich, N., **Jitkajornwanich, K.**, Piriyanont, B., Srisonphan, S. (2018). "Surface Modifications in Pulsed Microcoma Streamer Plasma", Proceedings of the 6th International Electrical Engineering Congress (iEECON 2018), Thailand. *[indexed by Web of Science Core Collection]*

[21] Chantharaj, S.~, Pornratthanapong, K., Chitsinpchayakun, P., Panboonyuen, T.˜, Vateekul, P., Lawavirojwong, S., Srestasathiern, P., **Jitkajornwanich, K.** (2018). "Semantic Segmentation on Medium-Resolution Satellite Images Using Deep Convolutional Networks with Remote Sensing Derived Indices", *Proceedings of the 15th International Joint Conference on Computer Science and Software Engineering (JCSSE 2018)*, Thailand. *[indexed by Web of Science Core Collection]*

[22] Bunme, P., Khamsen, N.~, Kasemsuwan, V., **Jitkajornwanich, K.**, Pichetjamroen, A., Teerakawanich, N., Srisonphan, S. (2017). "Polarity Effect of Pulsed Corona Discharge Plasma on Seed Surface Modification", Proceedings of the 2017 International Electrical Engineering Congress (iEECON 2017), Thailand. [indexed by Web of Science Core Collection]

[23] **Jitkajornwanich, K.** & Elmasri, R. (2017). "Proving Completeness of Open GIS SQL Spatial Relationships and Operations", *Proceedings of the 2017 International Electrical Engineering Congress (iEECON 2017)*, Chonburi, Thailand. *[indexed by Web of Science Core Collection]*

[24] **Jitkajornwanich, K.,** Vateekul, P., Panboonyuen, T.˜, Lawawirojwong, S., Srisonphan, S. (2017). "Road Map Extraction from Satellite Imagery Using Connected Component Analysis and Landscape Metrics", *Proceedings of the 2017 IEEE International Conference on Big Data (IEEE BigData 2017)*, MA, USA. *[indexed by Web of Science Core Collection]*

[25] **Jitkajornwanich, K.**, Vateekul, P., Gupta, U., Kormongkolkul, T.*, Jirakittayakorn, A.*, Lawawirojwong, S., Srisonphan, S. (2017). "Ocean Surface Current Prediction Based on HF Radar Observations Using Trajectory-Oriented Association Rule Mining", *Proceedings of the 2017 IEEE International Conference on Big Data (IEEE BigData 2017)*, Boston, MA, USA. *[indexed by Web of Science Core Collection]*

[26] Jirakittayakorn, A.*, Kormongkolkul, T.*, Vateekul, P., **Jitkajornwanich, K.**, Lawawirojwong, S. (2017). "Temporal kNN for Short-Term Ocean Current Prediction Based on HF Radar Observations", *Proceedings of the 2017 14th International Joint Conference on Computer Science and Software Engineering*, Thailand. *[indexed by Web of Science Core Collection]*

[27] Gupta, U., **Jitkajorwanich, K.**, Elmasri R. & Fegaras, L. (2016). "Adapting K-Means Clustering to Identify Spatial Patterns in Storms", *Proceedings of the 2016 IEEE International Conference on Big Data (IEEE BigData 2016)*, USA. *[indexed by Web of Science Core Collection]*.

[28] Pant, N., Fouladgar, M., Elmasri, R., **Jitkajornwanich, K.** (2016). "Performance Comparison of Spatial Indexing Structures for Different Query Types", *Proceedings of 57th IRF International Conference*, Pune, India.

[29] Soontranon, N., Lawawirojwong, S., **Jitkajornwanich, K.**, Srestasathiern, P. & Rakwatin, P. (2015). "A Comparison of Ground and Satellite Based Phenologies for Monitoring Rice

Field", *Proceedings of the 36th Asian Conference on Remote Sensing (ACRS 2015)*, Manila, Philippines.

[30] **Jitkajornwanich, K.**, Gupta, U., Shanmuganathan, S., Elmasri, R., Fegaras, L. & McEnery, J. (2013). "Complete Storm Identification Algorithms from Big Raw Rainfall Data Using MapReduce Framework", *Proceedings of the 2013 IEEE International Conference on Big Data (IEEE BigData 2013)*, Santa Clara, CA, USA. *[indexed by Web of Science Core Collection]*

[31] **Jitkajornwanich, K.**, Gupta, U., Elmasri, R., Fegaras, L., McEnery, J. (2013). "Using MapReduce to Speed Up Storm Identification from Big Raw Rainfall Data", *Proceedings of the 4th International Conference on Cloud Computing, GRIDs, and Virtualization*, Valencia, Spain.

[32] **Jitkajornwanich, K.**, Elmasri, R., McEnery, J. & Li, C. (2012). "Extracting Storm-Centric Characteristics from Raw Rainfall Data for Storm Analysis and Mining", *Proceedings of the ACM SIGSPATIAL GIS'12 Workshop on Analytics for Big Geospatial Data*, Redondo Beach, CA, USA.

[33] **Jitkajornwanich, K.**, Elmasri, R., Li, C. & McEnery, J. (2011). "Formalization of 2-D Spatial Ontology and OWL/Protégé Realization", *Proceedings of the ACM SIGMOD'11 Workshop on Semantic Web Information Management*, Greece.

Handbook and Book Chapters (n=8)

[1] Kraishan, O.~, **Jitkajornwanich, K.**, Vijaranakul, N. & Kee, K. (2026) "Predicting the Risk of Ultimate Low Ratings in Online Courses Using Machine Learning: Analyzing Engagement and Complexity for AI-Driven Early Instructional Communication Interventions" *Springer's Studies in Computational Intelligence Series (SCIS)*. Springer.

[2] Kee, K. F., & **Jitkajornwanich, K.** (2025). Diffusion of innovations as strategic communication. *In Handbook of Innovations in Strategic Communication* (pp. 66-76). Edward Elgar Publishing.

[3] Kee, K. F., Xu, S., & **Jitkajornwanich, K.** (2025). "AI, chatbots, and employee communication," S. Kim, P. M. Buzzanell, J. N. Kim, & A. Mazzei (Eds). *Routledge handbook of employee communication and organizational process*. Routledge.

[4] Pongto, R.*, Wiwattanaphon, N.*, Lekpong, P.*, Lawawirojwong, S., Srisonphan, S., Kee, K.F., **Jitkajornwanich, K.** (2020). "The Grid-Based Spatial ARIMA Model: An Innovation for Short-Term Predictions of Ocean Current Patterns with Big HF Radar Data", *Advances in Intelligent Systems and Computing,* vol. 936, Springer International Publishing.

[5] Panboonyuen, T.~, Vateekul, P., **Jitkajornwanich, K.**, Lawawirojwong, S. (2018). "An Enhanced Deep Convolutional Encoder-Decoder Network for Road Segmentation on Aerial Imagery", *Advances in Intelligent Systems and Computing*, vol. 566, Springer International Publishing. [**Best Student Paper Award**; Panboonyuen was a graduate student]

[6] Pant, N., Fouladgar, M., Elmasri, R., & **Jitkajornwanich, K.** (2018). "A Survey of Spatio-Temporal Database Research", *Intelligent Information and Database Systems*, In: Nguyen, N.T. et al. (eds.), Lecture Notes in Artificial Intelligence (LNAI), vol. 10752, Springer. *[Impact Factor: 0.302 (2005)]*

[7] **Jitkajornwanich, K.** & Elmasri, R. (2016). "Conceptual Analysis of Big Data Using Ontologies and EER", *Machine Learning, Optimization, and Big Data*, In: Pardalos, P., Pavone, M., Farinella, G.M., Cutello, V. (eds.), LNCS, vol. 9432, pp. 306-317, Springer International Publishing.

[8] **Jitkajornwanich, K.** (2014). Analysis and modeling techniques for geo-spatial and spatio-temporal datasets (Order No. 3624485). Available from ProQuest Dissertations & Theses Global; SciTech Premium Collection. (1553436349). Retrieved from https://lib-e2.lib.ttu.edu/login?url=https://www.proquest.com/dissertations-theses/analysis-modeling-techniques-geo-spatial-spatio/docview/1553436349/se-2

GRANTS, SCHOLARSHIPS, HONORS, & AWARDS:

2026 Co-author of Best Student Poster Award–winning paper, awarded to Mahedi Hasan, Science Gateways 2026 Conference, Washington, D.C., USA. Title: *"AI readiness as a community accomplishment: Communities of practice and sustainable science gateways."*

2019-22 European Union Grant entitled "Educational Training Centers for Automation in Thailand" (ETAT, Total Funded: EUR 93,464.00), funded by the "Erasmus+" Programme (EuRopean Community Action Scheme for the Mobility of University Students), European Union (http://etat-erasmus.com/), to Warangkhana Kimpan (PI at KMITL), Wisan Tangwongcharoen, Kridsada Budsara, Rungrat Wiangsripanawan, and **Kulsawasd Jitkajornwanich** (Co-PIs at KMITL, Bangkok, Thailand).

2021 Community Outreach and Engagement Award'21 on a consulting research project, "Tawai For Health" (a cloud platform for reporting, recording, analyzing, detecting, and predicting questionable health products as well as their side effects, fake claims) from Prince of Songkla University, Songkla, Thailand

2019 National Dissertation Award'19 from the Thai government (National Research Council of Thailand)

2018 Faculty Contribution to University Research Visibility Award'18 from KMITL, Bangkok, Thailand

2017 Co-author of Best Student Paper Award–winning paper, awarded to Teerapong Panboonyuen, 13th International Conference on Computing and Information Technology (IC2IT 2017), Bangkok, Thailand. Title: *"An Enhanced Deep Convolutional Encoder-Decoder Network for Road Segmentation on Aerial Imagery."*

2013 NSF travel grant for U.S.-based student authors of the 7th ACM International Conference on Distributed Event-Based Systems (DEBS'13)

2012 NSF travel grant for presenting authors of the 20th ACM SIGSPATIAL International Conference on Advances in Geographical Information Systems

2011 One of the five finalists in the 2011 Alcatel-Lucent/AT&T University Entrepreneurial Mobile Application Contest

2009 Scholastic Achievement (Honor Roll) in Spring 2009 by The University of Texas at Arlington

2008 Scholastic Achievement (Honor Roll) in Fall 2008 by The University of Texas at Arlington

2008 Cindy Atha Shira Simcha "Pay It Forward" Scholarship by The University of Texas at Arlington (by Mr. Joe Bentley)

2005 Royal Thai Government Scholarships by Ministry of Higher Education, Science, Research and Innovation of Thailand (full scholarships for pursuing Master's and Ph.D. in the USA)

2004 'magna cum laude' distinction equivalent in Computer Science from Chulalongkorn University, Bangkok, Thailand

TEACHING EXPERIENCE: (On-campus, hybrid, and online formats)

- **Communication**
  - **Introduction to Computational Communication** (graduate level), College of Media and Communication, *Texas Tech University*—Spring 2026
  - **Computational Communication Research** (graduate level), College of Media and Communication, *Texas Tech University*—Spring 2023 – present
  - **Introduction to Programming for Communication Research** (graduate level), College of Media and Communication, *Texas Tech University*—Spring 2024 – present
  - **Data Visualization and Storytelling Using Tableau** (graduate level), College of Media and Communication, *Texas Tech University*—Fall 2023 – present
  - **Communication in Organizations** (graduate level), College of Media and Communication, *Texas Tech University*—Fall 2024 – present
  - **Social Media Analytics** (both under/graduate levels), College of Media and

Communication, *Texas Tech University*—Summer 2023 – present
- **Media Insights and Data Analytics** (undergraduate level), College of Media and Communication, *Texas Tech University*—Fall 2023 – present

- **Programming, Information Processing and Big Data:**
  - **Introduction to Big Data** (undergraduate level), College of Media and Communication, *Texas Tech University*—Spring 2023 – present
  - **Programming Logic in Human-Centered Artificial Intelligence (Python Programming)**, (undergraduate level), School of Professional Studies, *Texas Tech University*—Fall 2025 – present
  - **Big Data Analytics** (including English sections), Dept. of Computer Science, *King Mongkut's Institute of Technology Ladkrabang*—Spring 2017 – Fall 2022; (Special Seminar Session), Guest Lecturer, School of Media Science, *Tokyo University of Technology*—Summer 2015
  - **Data Structures for Information Processing** (English sections only), Faculty of Engineering, *King Mongkut's Institute of Technology Ladkrabang*—Spring'17 – Fall 2022
  - **Web Mining**, Dept. of Computer Science, *King Mongkut's Institute of Technology Ladkrabang*—Fall 2017 – Spring 2019
  - **Python Programming,** AP program for financial engineering students, *King Mongkut's Institute of Technology Ladkrabang*—Summer'22, *Kiatnakin Phatra Bank*–2021
  - **C++ Programming** (English sections only), Robotics and AI Engineering, Faculty of Engineering, *King Mongkut's Institute of Technology Ladkrabang*—Fall 2022*;* Mechanical Engineering, Faculty of Engineering, *King Mongkut's Institute of Technology Ladkrabang*—Fall 2022
  - **Data Modeling and Storytelling Using Tableau**, *Defense Industry and Energy Center, a government agency under the Ministry of Defense of Thailand*–2022*, DIB: Digital Innovation Buddy government program*–2021-2022
  - **Data Engineering**, *Bank of Ayudhya Public Company Limited*–2019 - 2022
  - **Big Data for Disaster Management** (English sections only, EBA Fieldwork Thailand 2016), *Geo-Informatics and Space Technology Development Agency*—January 2016
  - **Large-Scale Computing Systems**, Guest Lecturer, Dept. of Computer Engineering, *Chulalongkorn University, Thailand*—Spring 2015, Spring 2016

- **Database for Big Data:**
  - **DBMS Models and Implementation Techniques / Database Systems II** (CSE 3331/5331, *UT-Arlington*), Teaching Assistant, Dept. of Computer Science and Engineering, Spring 2014
  - **Information Systems and Databases** (English sections only), Faculty of Engineering, *King Mongkut's Institute of Technology Ladkrabang*—Spring 2020 – Fall 2021
  - **Database Systems and File Structures / Database Systems I** (CSE 3330/5330, *UT-Arlington*), Dept. of Computer Science and Engineering, Summer 2013, Fall 2013
  - **Spatial Databases and GIS Applications**, Dept. of Computer Science, *King Mongkut's Institute of Technology Ladkrabang*—Fall 2017 – Fall 2022
  - **Distributed Database Systems**, Guest Lecturer, Dept. of Mathematics and Computer Science, *Chulalongkorn University, Thailand*—Spring 2016

- **GIS:**
  - **Internet GIS and Web Map Server**, GISTDA Academy, *Geo-Informatics and Space Technology Development Agency*—May 2016
  - **Advanced Modeling in GIS**, GISTDA Academy, *Geo-Informatics and Space Technology Development Agency*—April 2016

- **GIS for Beginners**, GISTDA Academy, *Geo-Informatics and Space Technology Development Agency*—February 2015

ADVISEES:

Ph.D. Advisees:

[1] Uraiwan (Beatrice) Jansong, expected completion in 2029, College of Media and Communication, Texas Tech University.
[2] Obada Kraishan, expected completion in 2028, College of Media and Communication, Texas Tech University.
[3] (Committee member of) Rich Riddle, expected completion in 2028, Department of English, College of Arts and Sciences, Texas Tech University.
[4] (Co-advisor of) Nattadet (Nat) Vijaranakul, "Dam Data Analysis Using Satellite Imagery and Big Data for Raising Awareness and Developing an Early Warning System in Case of Dam Incidents", expected completion in 2027, Department of Computer Science, KMITL, Thailand.
[5] Manit (Lo) Chansuparp, "Moving Object Detection Using Integrated Spatial and Motion-Based Method", graduated in 2022. Department of Computer Science, KMITL, Thailand.
[6] (Co-advisor of) Teerapong Panboonyuen, "Land Cover Classification Using Big Spatial Data Techniques", graduated in 2020, Department of Computer Engineering, Chulalongkorn University, Thailand.

Master's Advisees:

[5] Piyawat (Banks) Saewong, expected completion in 2027, College of Media & Communication, Texas Tech University.
[6] Uraiwan (Beatrice) Jansong (thesis), "Computational Analysis & Message Design for Crisis Communication During Natural Disaster Events", expected completion in 2026, College of Media & Communication, Texas Tech University.
[7] Kanatip (Ham) Prompol (thesis), "Design and Development of Human-AI Innovations and Applications to Enhance Communication Efficiency", expected completion in 2026, College of Media & Communication, Texas Tech University.
[8] Pariyakorn (Pin) Pramoonsin, expected completion in 2027, "A Novel Approach for Automatic Topic Labeling from Topic Models" Department of Computer Science, KMITL, Thailand.
[9] Pisit (Ess) Pruangprat, expected completion in 2027, "Distributed Graph Processing System on CPU-GPU for Dynamic Environments" Department of Computer Science, KMITL, Thailand.
[10] Narathip (Nook) Thanyakunsajja (thesis), "Early Diagnosis of Knee Osteoarthritis With a Natural Language Processing–Driven Approach Based on Clinician Notes: Development and Validation Study", graduated in 2025, Department of Computer Science, KMITL, Thailand.
[11] Thanathip (Mac) Chomthong (thesis), "Evaluating and Improving Automated Race Prediction Using Machine Learning", graduated in 2025, Department of Computer Science, KMITL, Thailand.
[12] Obada Kraishan (thesis), "Computational Analysis & Message Design for Crisis Communication During Natural Disaster Events", graduated in 2025, College of Media & Communication, Texas Tech University.
[13] Kittisakpattana (Ong) Rachaodee (non-thesis), "Analyzing Users Segmentation in Clusters on X (Twitter) through Comments and Interactions", graduated in 2025, Department of Computer Science, KMITL, Thailand.
[14] Lattapon (Boat) Siriket (thesis), "Improving the Word Error Rate of OpenAI's Whisper

Model in Transcribing Thai Homophones in the Context of Legal News", graduated in 2025, Department of Computer Science, KMITL, Thailand.

[15] Chanwit (Dai) Kongthong (thesis), "Unleashing Insights: Harnessing Big Unstructured Data through Text Analysis to Drive Decision-Making with Analysis and Visualization Framework", graduated in 2024, Department of Computer Science, KMITL, Thailand.

[16] Kayode Ishola (non-thesis), "Diffusion Predictors of YouTube Content on Twitter (X)", graduated in 2023, College of Media & Communication, Texas Tech University.

[17] Phanumart (Mind) Tookjak (non-thesis), "Correlating Users' Emotions on Twitter with Fluctuation in Cryptocurrency Market", graduated in 2023, Department of Computer Science, KMITL, Thailand.

[18] Nattadet (Nat) Vijaranakul (thesis), "Air Quality Assessment Based on Landsat 8 Images Using Supervised Machine Learning Techniques", graduated in 2022, Department of Computer Science, KMITL, Thailand.

[19] Thanat (Get) Vajeethaveesin (thesis), "A Performance Comparison Between GIS-Based Method and Neural Network Method in Assessing Flood Risks in Ayutthaya Province", publication requirement completed in 2022, Department of Computer Science, KMITL, Thailand.

[20] (Co-advisor of) Teerapong Panboonyuen (thesis), "Semantic Road Segmentation on Remotely-Sensed Images Using Deep Convolutional Neural Networks and Landscape Metrics", graduated in 2017, Department of Computer Engineering, Chulalongkorn University, Thailand.

- *Best Student Paper Award* at the 13th International Conference on Computing and Information Technology (IC2IT 2017)

Undergraduate Advisees in Department of Computer Science, KMITL, Thailand:

[21] Atiwath Chimthiam, "A Web Application for Tracking the COVID-19 Outbreak through Social Media Platforms", graduated in 2021

[22] Passakorn Limrungrueangrat, "A Web Application for Tracking the COVID-19 Outbreak through Social Media Platforms", graduated in 2021

[23] Phongsakorn Srikate, "Development of a Digital Menu and Loyalty Platform for Restaurants in the 'New Normal' Era during the COVID-19 Pandemic", graduated in 2021

[24] Pusith Rattanakosol, "Spatial Analysis and Visualization of Road Accidents Using Geographic Information Systems (GIS)", graduated in 2021

[25] Teerapon Sae-sue, "Rice Yield Estimation Based on Satellite-Oriented Phenology Using ML", graduated in 2020

[26] Akrapong Kulchot, "Rice Yield Estimation Based on Satellite-Oriented Phenology Using ML", graduated in 2020

[27] Teerapong Taengmuang, "Thai News Text Summarization Using Deep Learning", graduated in 2018

[28] Surinthon Testhomya, "Utilizing RasDaMan database for geo-informatics applications", graduated in 2018

[29] Auengloung Sae-kyu, "Utilizing RasDaMan database for geo-informatics applications", graduated in 2018

[30] Rattanon Siangsiri, "Web-Based CS Special Problem Search System with Visualization Features", graduated in 2018

[31] Kongthong, C., "Utilizing Twitter Data for Early Flood Warning in Thailand", graduated in 2017

[32] Khongsoontornjaroen, N., "Utilizing Twitter Data for Early Flood Warning in Thailand", graduated in 2017

[33] Kaiyasuan, J., "Utilizing Twitter Data for Early Flood Warning in Thailand", graduated in 2017

[34] Pongto, R., "The Grid-Based Spatial ARIMA Model: An Innovation for

Short-Term Predictions of Ocean Current Patterns with Big HF Radar Data", graduated in 2017

[35] Wiwattanaphon, N., "The Grid-Based Spatial ARIMA Model: An Innovation for Short-Term Predictions of Ocean Current Patterns with Big HF Radar Data", graduated in 2017

[36] Lekpong, P., "The Grid-Based Spatial ARIMA Model: An Innovation for Short-Term Predictions of Ocean Current Patterns with Big HF Radar Data", graduated in 2017

[37] Kuhaapirom, N., "Performance Comparisons of Graph-Based NOSQL Systems on Stand-Alone Environment", graduated in 2017

[38] Pinthong, T., "Performance Comparisons of Graph-Based NOSQL Systems on Stand-Alone Environment", graduated in 2017

[39] Limadisai, N., "Performance Comparisons of Graph-Based NOSQL Systems on Stand-Alone Environment", graduated in 2017

High School Students:

[40] Brenton Grigsby from UTA TRiO/Upward Bound Pre-College Programs

- Won the Second Prize in the Mathematics Category at the 2010 Annual Academic Bowl Competition (ABC '10) in North Texas.

MA Committees in College of Media & Communication at Texas Tech University

[1] Aguh, Emmanuella, "Framing of the COVID-19 Pandemic on Selected Nigerian Newspaper Front Pages", Dept. of Journalism & Creative Media Industries, College of Media and Communication (as Committee Member, Dr. Lyombe Eko is her advisor.), graduated in 2023.

[2] Asiri, Huda, "Examining Saudi Arabians' Perceptions and Adoption of ChatGPT", Dept. of Public Relations & Strategic Communication Management, College of Media and Communication (as Committee Member, Dr. Shan Xu is her advisor.), graduated in 2023.

[3] Greenstone, Gabi, "The usage of drones in forensic science and how they are a beneficial asset to forensic investigations", Institute for Forensic Science, Department of Environmental Toxicology, (as Committee Member, Dr. Paola Tiedemann is her advisor.) [in progress]

TECHNICAL SKILLS:

- **Programming:**
  - Python, C, C++, C#, MATLAB, Java, HTML, PHP, JavaScript
- **Databases:**
  - [NoSQL] MongoDB, Neo4J, Cypher
  - [Microsoft] SQLServer (w/Spatial Capabilities), T-SQL, BIDS, PowerBI
  - [Oracle] PL/SQL, Oracle Spatial, MySQL
  - [GIS] PostgreSQL, PostGIS, ESRI Arc Geodatabases
- **Software:**
  - Apache Hadoop/Spark, Anaconda/Jupyter Notebook, PyCharm, Google Colab, RapidMiner, ArcGIS, Tableau, PowerBI, HydroDesktop, Splunk

SELF DEVELOPMENT & TRAINING:

- Neo4j Graph Data Science Certification (https://graphacademy.neo4j.com/c/3e067cab-90fb-45a0-8824-217737ff19ae/), Neo4j (https://neo4j.com/)

- Building Neo4j Applications with Python, Neo4j
- Texas Cybersecurity Awareness Training, Texas Tech
- EEO/Title IX and Jeanne Clery Act/ Ethical Conduct Compliance Training, Texas Tech
- Safety Awareness Training, Texas Tech
- Human Subject Research - Required Basic, CITI Program (https://www.citiprogram.org/verify/?w51fb6a8c-1517-4f2f-b729-478c0d431ec5-55914226) (https://about.citiprogram.org/)
- Research Security, CITI Program (https://www.citiprogram.org/verify/?w5773ae3a-cc5f-4cde-9718-2639db2b3d00-74733831) (https://about.citiprogram.org/)
- FERPA Training, Texas Tech
- Neo4j Graph Data Science Fundamentals, Neo4j
- Introduction to Neo4j Graph Data Science, Neo4j
- Graph Data Modeling Fundamentals, Neo4j
- Intermediate Cypher Queries, Neo4j
- Cypher Fundamentals, Neo4j
- Neo4j Fundamentals, Neo4j
- Landsat-8 Processing Software Development, US Geological Survey: USGS
- Integration of Geo-Informatics for Disaster Management, GISTDA of Thailand
- Designing Self-Service BI and Big Data Solutions (20467C, MCSE), Microsoft
- Oracle DBA I, II, and Performance Tuning courses (Oracle University), Oracle

COLLEGE & DEPARTMENTAL SERVICE:

2024-25	Subcommittee member for the new interdisciplinary degree Human-Centered AI (HCAI), which will be housed in the School of Professional Studies under TTU Online Learning, within the Office of the Provost, responsible for designing and developing one of the core courses for the HCAI degree called, "Programming Logic in Human-Centered AI," which will be offered as an asynchronous online course in an 8-week format/TTU Online+
2024-25	Served as a Curriculum Committee member for proposing new courses in 3-degree tracks within Digital Media and Professional Communication (Data Innovation, Corporate Communication, and Digital Influence).
2023-24	Graduate Council, Committee Member, meeting Monthly, appointed, Pro Bono, PhD admissions, fellowship recommendations, etc., Texas Tech University
2023	Serving as a committee member for the search for a faculty position in Data/AI Journalism in the Journalism Department, Texas Tech University
2017-22	Curriculum committee for Master's Program in Data Science, KMITL, Thailand.
2017-22	Assessment committee, Master's Program Accreditation and National Ranking, KMITL, Thailand.
2016-22	Academic advisor for cooperative education and internship students, KMITL, Thailand.
2016-22	Reviewer for the journals and conferences hosted by KMITL, Thailand.

OTHER ACADEMIC ACTIVITIES:

Associate Editor

- Served as an Associate Editor of the International Journal of Mobile Human Computer Interaction (IJMHCI), IGI Global Scientific Publishing.

Peer Review

- Reviewing more than 50 articles across 38 journals in computational/communication/multidisciplinary fields, as well as technical/engineering/AI-related journals. All of these articles are indexed in Web of Science, Scopus, and/or SJR, as described in the table below.

No.	Journal Title	IF (2022)	IF (5-yr)	Publisher
1	Geo-Spatial Information Science	4.4	4.4	Taylor & Francis
2	AI and Society	2.9	2.9	SPRINGER NATURE
3	IEEE Transactions on Industrial Informatics	12.9	11.9	IEEE
4	IEEE Transactions on Geoscience and Remote Sensing	8.2	8.8	IEEE
5	IEEE Transactions on Circuits and Systems for Video Technology	8.4	7.1	IEEE
6	Network-Computation in Neural Systems	7.8	2.9	Taylor & Francis
7	IEEE Journal of Biomedical and Health Informatics	7.7	7.7	IEEE
8	IEEE Open Journal of Engineering in Medicine and Biology	5.8	5.8	IEEE
9	IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing	5.5	5.5	IEEE
10	International Journal of Digital Earth	5.1	4.5	Taylor & Francis
11	CAAI Transactions on Intelligence Technology	5.1	4.5	WILEY
12	IEEE Geoscience and Remote Sensing Letters	4.8	5.5	IEEE
13	Scientific Reports	4.6	4.9	NATURE
14	IEEE Transactions on Consumer Electronics	4.3	3.9	IEEE
15	Stochastic Environmental Research and Risk Assessment	4.2	3.5	SPRINGER
16	Peer-To-Peer Networking and Applications	4.2	3.8	SPRINGER
17	European Journal of Remote Sensing	4	4.4	Taylor & Francis
18	IEEE Access	3.9	4.1	IEEE
19	Expert Systems	3.3	3.2	WILEY
20	International Journal of Imaging Systems and Technology	3.3	3.1	WILEY
21	Journal of Intelligent Systems	3	2.5	De Gruyter Brill
22	International Journal of Food Properties	2.9	2.9	Taylor & Francis
23	Earth Science Informatics	2.8	2.9	SPRINGER HEIDELBERG
24	Canadian Journal of Remote Sensing	2.6	2.6	Taylor & Francis
25	The Photogrammetric Record	2.4	2.3	WILEY
26	Transactions in Gis	2.4	2.8	WILEY
27	IET Image Processing	2.3	2.3	WILEY
28	Journal of Spatial Science	1.9	1.8	Taylor & Francis
29	IEEE Transactions on Artificial Intelligence	6.5		IEEE
30	International Journal of Parallel, Emergent and Distributed Systems	0.8	2.3	Taylor & Francis
31	Transactions on Consumer Electronics	10.9		IEEE
32	International Journal of Sensors, Wireless Communications and Control	- (2.9, Scopus)		Bentham Science
33	Asian Journal of Communication	1.5		Routledge
34	Big Data & Society	5.9	9.0	SAGE
35	Social Science Computer Review	2.7	4.2	SAGE
36	Management Communication Quarterly	2.4	2.8	SAGE
37	Computational Communication Research	SJR: Q1, 1.383		Amsterdam University Press
38	Journal of Broadcasting & Electronic Media	2.2	3.8	Taylor & Francis

Paper Presentations at Professional Meetings and Seminars

1. Kraishan, O., Jitkajornwanich, K., Vijaranakul, N. & Kee, K. (2025) Predicting the Risk of Ultimate Low Ratings in Online Asynchronous Courses: Analyzing Engagement, Complexity, and Early Ratings for Early Interventions [presented at the 23rd IEEE/ACIS International Conference on Software Engineering Research, Management and Applications (SERA 2025)]
2. Prompol, K., Jansong, U. & Jitkajornwanich, K. (2025) Identifying Common Themes and Persuasive Elements in Healthcare Customer Reviews. [presented at the 23rd IEEE/ACIS International Conference on Software Engineering Research, Management and Applications (SERA 2025)]
3. Jitkajornwanich, K. & Tookjak, P. (2024) Text Mining and Sentiment Analysis of YouTube Videos: New Analytics Features for the 'Social Media Macroscope' Science Gateway. [presented

at the Science Gateways 2024 Annual Conference]

4. Chumthong, T., Jitkajornwanich, K., Kraishan, O., Kee, K. F., & Narabin, A. (2024, December). Leveraging Race Prediction Algorithms to Enhance Team Composition in Big Data Science Teams. [presented at the 2024 IEEE International Conference on Big Data]
5. Udomwisanpat, P., Jitkajornwanich, K., Kraishan, O., Srestasatheirn, P., Lawawirojwong, S., & Charoenporn, P. (2024). Visualizing political communication trends across generations on X (Twitter): Insights through topic modeling and word clouds. [presented at the 23rd IEEE/WIC International Conference on Web Intelligence and Intelligent Agent Technology]
6. Pant, N., Fouladgar, M., Elmasri, R., & Jitkajornwanich, K. (2018). "A Survey of Spatio-Temporal Database Research", Intelligent Information and Database Systems, In: Nguyen, N.T. et al. (eds.), Lecture Notes in Artificial Intelligence (LNAI), vol. 10752, Springer. [Impact Factor: 0.302 (2005)]
7. Jitkajornwanich, K. & Elmasri, R. (2016). "Conceptual Analysis of Big Data Using Ontologies and EER", Machine Learning, Optimization, and Big Data, In: Pardalos, P., Pavone, M., Farinella, G.M., Cutello, V. (eds.), LNCS, vol. 9432, pp. 306-317, Springer International Publishing.
8. Jitkajornwanich, K. (2016). Roles of Spatio-temporal Data Mining in Geo-informatics Applications. Invited talk at the Colloquia, Department of Computer Science, University of Texas at Arlington.
9. Jitkajornwanich, K. (2013) An Efficient Storm Identification from Big Rainfall Data Using MapReduce, dissertation presentation at the 13th ACM International Conference on Distributed Event-Based Systems (DEBS) at The University of Texas at Arlington in 2013.
10. McEnery, J. A., & Jitkajornwanich, K. (2012, December). Depth-area-duration characteristics of storm rainfall in Texas using Multi-Sensor Precipitation Estimates. In AGU Fall Meeting Abstracts (Vol. 2012, pp. H33K-1488).

Outreach

- Co-organizer of the NextGen AI Lab Summer Workshop for high school students in Lubbock, Texas, an outreach program focused on Generative AI and the Next Generation. The workshop introduces students to core concepts of generative AI and examines how children and adolescents will grow up in a world increasingly shaped by AI technologies.

- Served as a judge for the Annual South Plains Regional Science & Engineering Fair (February 26, 2025), a regional competition that advances students to the International Science and Engineering Fair (ISEF). The event featured over 400 K–12 science and engineering projects from schools across twenty-one counties in the South Plains, supporting student engagement in scientific inquiry and innovation.

Mentorship Activities

- I mentored 3 undergraduate students in research, and 2 of them reached the final round of the URC Conference 2024. I am very proud of these undergraduate students.

- Five students from both undergraduate and graduate courses were able to earn certificates, and two of them achieved certification from Neo4j, "Neo4j Graph Data Science Certification", a real-world industry professional company in graph data science, after taking my course in Social Media Analytics. I am so proud of them. I will continue to encourage more students to pursue certifications and be successful not only in academia but also in real-world industries.

- I mentored one undergraduate student, Robin D. Hoesli, in research from the Department of Computer Science, Edward E. Whitacre Jr. College of Engineering, TTU.

- Served as a judge for the Promoting Cross-Disciplinary Faculty Collaborations in Research

conference, organized by the Institute of Studies in Pragmaticism, TTU

INDUSTRY & GOVERNMENT CONSULTING:

2022-23 **Consultant**, **Bureau of AIDS, TB and STIs**, Department of Disease Control, Ministry of Public Health of Thailand on a project called "HIV Info Hub in Thailand", funded by a partnership between **Center for Disease Control (CDC), Atlanta** and **PEPFAR (U.S. President's Emergency Plan for AIDS Relief)**, Department of State (DOS) to create an international database to closely monitor HIV epidemic on a global scale.

2022-23 **Consultant**, cybersecurity and national defense–one of the primary data sources is a large collection of news articles for **Defense Industry and Energy Center**, a government agency under the **Ministry of Defense of Thailand**

2021-23 **Data Science Trainer**, Python Programming and Data Engineering to **Kiatnakin Phatra Bank** (https://bank.kkpfg.com/en/home)

2021-23 **Trainer & Advisor**, DIB (Digital Innovation Buddy) government campaign

2019-23 **Consultant**, designing and implementing a *Web-based System to Improve Linkages between/and within Decent Work Country Programme Tools and the Strategic Management Modules* for **International Labour Organization** (ILO, https://www.ilo.org/global/lang--en/index.htm), a branch of the United Nations in Thailand.

2019-22 **Trainer,** Big Data Bootcamp to **Bank of Ayudhya Public Company Limited** (Krungsri, https://www.krungsri.com/en/personal).

2022 **Trainer**, give the following training courses to government officials in the **Defense Industry and Energy Center**, a government agency under the **Ministry of Defense of Thailand:**

- Big Data Systems: Concepts and Practices
- Databases and Data Warehouses Management
- Analysis and Design of Big Data Storage
- Storytelling and Data Visualization Using Tableau

2022 **Trainer,** PostgreSQL Database and PostGIS to **National Statistical Office, Ministry of Information and Communication Technology of Thailand** (MICT, http://web.nso.go.th/)

2020 **Trainer**, *"Data Analytics for Micro Organizations"* based on **General Assembly** (https://generalassemb.ly/) through True Digital Academy to employee of
July **True Digital Group** company (https://www.truedigital.com/).
August **Siam Commercial Bank Public Company Limited** (SCB, https://www.scb.co.th/en/personal-banking.html).

2019-20 **Consultant,** designing and implementing "Tawai For Health," a cloud platform (driven by big data, crowdsourcing, and AI) for reporting, recording, analyzing, detecting, and predicting questionable health products (and their side effects, fake claims). "Tawai For Health" is an innovation project funded by **Health Systems Research Institute**, an autonomous state agency, and **Prince of Songkla University**, a public university in Thailand.

2018-19 **Consultant,** Designed and implemented a *Big Spatial Storage System for Land Cover Classification Application in Thailand* (Nationally Implemented Database) at **Geo-Informatics and Space Technology Development Agency** (GISTDA, Public Organization & Thailand's Equivalent of NASA, https://www.gistda.or.th/main/en).

2018-19 Delivered consultation on improving and speeding up an online stock management system called *"Integrated Cloud Inventory Platform"* for an innovative startup company called Zort (https://zortout.com/en).

2018-20 Delivered training to government officials of **Thailand's Office of The Attorney General** (AGO, https://www2.ago.go.th/)
2020 on "*The Principles and Simple Cases of DATA SCIENCE for AGO"*.
2019 on "*Big Data & Blockchain Concepts"*.
2018 on "*Database Design Principles"*.

2017-19 Delivered training to employee of **Motif Technology Public Company Limited** (https://motiftech.com/en/), an IT consultation and solution provider focusing on financial and banking industries

2019 on *"Advanced Database Design"*.
2018 on *"Database Design Principles"*.
2017 on *"SQL Fundamentals and Implementation with Oracle"*

== End of CV ==