CURRICULUM VITAE

Name Thiraphat Tanphiriyakun, MD, MSc

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Positions

2025	Deputy to the President of Chiang Mai Provincial Administrative Organization - Chiang Mai Provincial Administrative Organization, Chiang Mai, TH
2017 – 2024	CTO & Co-founder Ocare Health Hub, www.ocare.co.th Head of Data Research Lab *- Technology / Engineer team leader in AI and Health Data Analytics technology* *- Currently implemented in 40 hospitals in Thailand*
2020 – 2024	Sriphat Medical Center, Chiang Mai University, TH *- Assistant Director, Chief Information Officer (CIO), Chief Information Security Officer (CISO)* *- Orthopaedics surgery physician* *- Consultant and committee, Faculty of Medicine Chiang Mai University To promote and manage medical inventions and innovations*

Education

2021	Hip and Knee Adult Reconstructive Surgery Fellowship *Faculty of Medicine, Chiang Mai University*
2020	Diploma of the Thai Board of Orthopaedics *Faculty of Medicine, Chiang Mai University*
2020	Master of Science, Data Science *Faculty of Engineering, Chiang Mai University*
2013	Doctor of Medicine *Faculty of Medicine, Chiang Mai University*

Area of Interest Machine learning (AI), Big Data, and Informatics research in medicine
System implementation and deployment of prediction models

Skills Organization data and technology transformation
Machine learning development and deployment, Cloud computing
Programming language: Python, R

Intellectual Property(s)

1. HII, Health Information Integration, Thai Patent (Ocare Health Hub)

Award(s)

1. 2019 - Winner - Medical Innovation - AI Development to Predict ICU Admission After Orthopaedics Surgery - 1st MedPSU Innovation Conference 2019
2. 2019 - Merit Research and Development
   AI - Health Data Analytics - Thailand ICT Awards 2020

Training and Certificates

1. 2023 - CQI and IRCA Certified ISO/IEC 27001:2022 Information Security Management Systems (ISMS) Lead Auditor Training Course (PR373)
2. 2022 - DCEO#5 - The Leadership for Digital Transformation Thailand - Digital Economy Promotion Agency (DEPA)
3. 2019 - Visiting Orthopaedic Resident
   National University of Singapore
4. 2019 - South East Asia Machine Learning School 2019
   Jakarta, Indonesia
5. 2017 - Visiting Orthopaedic Resident
   Stanford University, CA, USA
6. 2016 - StartX 8 - Disrupt University
7. 2013 - Visiting Medical Student
   Juntendo University, Tokyo, Japan
8. 2012 - Visiting Medical Student
   University of Illinois Chicago, IL, USA

Researches and Publications

1. Donlapark P., Parichart P., Phimphaka T., Suthep S., Natthanaphop I., **Thiraphat T.** (2022). Developing A Visual-Interactive Interface for Electronic Health Record Labeling: An Explainable Machine Learning Approach. *Arxiv Preprint, 2022*. https://doi.org/10.48550/arXiv.2209.12778

2. Chulsomlee, K., Prukviwat, S., Tuntiyatorn, P., Vasaruchapong, S., Kulachote, N., Sirisreetreeux, N., **Tanphiriyakun, T.**, Chanplakorn, P. and Sa-Ngasoongsong, P., 2022. Correlation between shape-closed femoral stem design and bone cement implantation syndrome in osteoporotic elderly femoral neck fracture undergoing cemented hip arthroplasty: a retrospective case-control study in 128 patients. *Orthopaedics &*

Traumatology: Surgery & Research, p.103450. https://doi.org/10.1016/j.otsr.2022.103450

3. Kitcharanant, N., Chotiyarnwong, P., **Tanphiriyakun, T.** et al. Development and internal validation of a machine-learning-developed model for predicting 1-year mortality after fragility hip fracture. BMC Geriatr 22, 451 (2022). https://doi.org/10.1186/s12877-022-03152-x

4. Sinprasat, S. ., **Tanphiriyakun, T.** ., & Yotwongratsamee, N. . (2022). Automated Chief Complaints Visualization Using Word Cloud form Textual Data to Enhance Patient Quick Review. Journal of the Thai Medical Informatics Association, 8(1), 28–33. Retrieved from https://he03.tci-thaijo.org/index.php/jtmi/article/view/199

5. **Tanphiriyakun, T.**, Rojanasthien, S. & Khumrin, P. Bone mineral density response prediction following osteoporosis treatment using machine learning to aid personalized therapy. *Sci Rep* 11, 13811 (2021). https://doi.org/10.1038/s41598-021-93152-5

6. **Thiraphat T.,** Phasit C., (2020), "Biomedical Research Collaboration: Method of Parameter Extraction and Analysis using MEDLINE Database", Data Science and Engineering (DSE) Record, vol. 1 (1), pp. 21-25.

7. **Thiraphat T.,** Dumnoensun P., (2019), "Computer-Aided Detection for Determining Aggressiveness of Tumor Lesion in Long-bone Plain Radiograph; Machine Learning Model", RCOST 2019, Oral Presentation.

Lectures and Speaker

1. “AI & Big Data in Healthcare - Innovation to Market, Orthopaedic Entrepreneur Journey”,
   8 Mar 2024, Siriraj-Chula-Chiang mai Orthopaedic Conference 2024
2. “1st CTO Talk”,
   31 Oct 2023, Builds - CMU: Startup & Entrepreneurial Platform
3. “Region-12 Health Network Dashboard”,
   19 Sep 2023, Region-12 Annual Academic Conference, Hat Yai, Songkhla
4. “Experience Sharing - Ocare Health Hub” ,
   9 Sep 2023, MEDCHIC Innovation Program, InnoHealth Suandok Medical Innovation District
5. “Product-Market Fit”,
   13 May 2023, MEDCHIC Innovation Program, InnoHealth Suandok Medical Innovation District
6. “AI in Orthopaedics - Translate Conventional Research to Machine Learning Project”,
   24 Mar 2023, 1st THORS - Thailand Orthopaedic Research and Sciences Conference, RCOST, Ramathibodi Hospital
7. “Biomechanics of the Hips”,
   23 March 2023, Lecturer in Basic Science Course lecture, RCOST - Royal College of Orthopaedic Surgeons of Thailand, Ramathibodi Hospital
8. “Data-driven healthcare to enhance patient care”,

13 December 2022, Guest speaker in the course 01057697 Seminar of Ph.D. students, Innovation and Agro-Industry Management Program Department of Agro-Industrial Technology Faculty of Agro-Industry Kasetsart University.