Dhanush Kukatla

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Education

Arizona State University — **Tempe, Arizona, USA**
Master of Science in Computer Science (MSCS) – GPA: 3.4/4.0 — **Aug. 2022 – May 2024**

REVA University — **Bengaluru, India**
Bachelor of Technology, Computer Science Engineering – GPA: 9.05/10 — **Aug. 2018 – May 2022**

Experience

Software Developer (AWS/DevOps) — **June. 2024 – Present**
Spark Cloud INC — **Remote - Atlanta, GA**

- Led full life-cycle project management using Agile methodologies, including team leadership and timely delivery, while designing and implementing IAM solutions for AWS.
- Deployed CI/CD pipelines with AWS CodePipeline and Ansible, reducing deployment time by 30%, and customized tools through script development to enhance processes, with a focus on test-driven development.
- Managed Infrastructure as Code (IaC) using AWS CloudFormation and Terraform, ensuring scalable and consistent cloud resource management in UNIX environments.
- Boosted monitoring and reliability by 20% using AWS CloudWatch and Elasticsearch and reduced cloud costs by 15%.
- Strengthened security with IAM roles, automated testing with AWS Lambda, and provided user support and training to optimize workflow efficiency, leveraging Kafka for reliable data streaming.

Graduate Service Assistant — **Dec. 2023 – May 2024**
Arizona State University — **Tempe, AZ**

- Led interactive session in CSE 468, promoting active learning and understanding of complex security concepts within computer networks.
- Maintained academic integrity by overseeing exam proctoring and resolving grading concerns, upholding rigorous standards in Computer Network Security education.
- Assisted faculty in grading coordination and providing instructional aid specific to Computer Network Security, contributing to the efficient operation of the course.

Projects

Digieye, Mobile Application Development

- Engineered Digieye, a mobile application for the visually impaired, using Android Studio, Java, SQLite, and Firebase for real-time data storage and synchronization, empowering over 100 users with enhanced accessibility and safety.
- Integrated Google ML Kit to implement OCR and TTS capabilities, enabling seamless text-to-speech conversion and significantly improving accessibility, with a 40% increase in usability for visually impaired users.
- Designed and deployed real-time object detection leveraging pre-trained TensorFlow Lite models, providing a 95% accuracy rate and improving user navigation and safety in unfamiliar environments.
- Adopted a user-centric design methodology, implementing Visual Question Answering (VQA) with TensorFlow Lite, allowing users to interact with their surroundings effectively, resulting in a 90% satisfaction rate based on user surveys.
- Built a robust emergency response system using Google Maps API for live location tracking and Twilio for SMS integration, ensuring faster response times and improved user safety during critical situations.

Satellite Imagery Analysis using Machine Learning Project

- Led the development of machine learning models to analyze Sentinel-2 satellite data, integrating Docker and Kubernetes for scalable deployment on AWS and achieving an 87% accuracy in land cover classification.
- Utilized Python and relevant libraries (e.g., TensorFlow, scikit-learn) to design, train, and evaluate machine learning algorithms, leveraging IaaS and PaaS services from GCP and Azure.
- Published a research paper, https://www.riverpublishers.com/pdf/ebook/chapter/RP9788770229005C72.pdf

Technical Skills

Languages: Java, Python, SQL (MySQL, Oracle, PostgreSQL), C, C++, JavaScript, HTML, CSS, Data Structures
Frameworks/Technologies: AWS, Angular, Blockchain, D3js, UiPath, MATLAB, MongoDB, Figma, Sketch, GCP, Redis, Cassandra, Microsoft Azure (IaaS, PaaS), Elasticsearch, Android Studio, AI/ML, Unix/Linux OS, Restful APIs, Spring boot, React, Kotlin, TensorFlow
DevOps tools: Docker, Terraform, Ansible, Kubernetes, Jenkins, GitHub Actions, Grafana, CloudWatch, Kafka
Developer Tools: IntelliJ, GitHub, VS Code, Jira, Jupyter notebook, Code Blocks, Eclipse, Linux commands

Certifications: Microsoft certified azure fundamentals (AZ-900, AI-900, DP-900), UiPath RPA.