

Mithil Sai Jakka

Results-driven **Software Development Engineer**, leveraging hands-on experience in cloud infrastructure optimization, system reliability, and CI/CD pipelines. Proven ability to bridge software development with operational excellence, evidenced by reducing application latency by **15%**, automating workflows to save **\$2.4K/month**, and maintaining **99.9% uptime** for mission-critical systems. Passionate about solving scalability challenges, driving efficiency through automation, and ensuring seamless performance in large-scale environments. Seeking to apply expertise in **Python, Java, C++, AWS, and Azure** to enhance production workflows and system resilience.

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Skills

Python, Java, C++, JavaScript, SQL, R, Linux System Administration, Git, AWS, Google Cloud, TensorFlow, Scikit-learn, React, Angular, Firebase, Docker, Kubernetes, MySQL, PostgreSQL, Problem-Solving, Cross-Functional Collaboration, Technical Documentation, Agile Methodology, CI/CD Pipelines, System Reliability Engineering, Performance Optimization, Data Structures, Algorithms, Machine Learning, Cloud Computing, DevOps, RESTful APIs, Microservices, Data Science, Bioinformatics, Data Analysis, Networking, PHP, Problem Solving Skills, Product, Programming, TCP, TCP/IP

Experience

Healthcare Triangle - Software Development Intern June 2024 - Present

- Engineered AI/ML models using TensorFlow on AWS SageMaker, achieving **95% predictive accuracy** for healthcare datasets, directly impacting diagnostic efficiency for **10,000+ patient records**.
- Optimized AWS cloud infrastructure, reducing application latency by **15%** and cutting monthly operational costs by **\$2,400** through auto-scaling configurations.
- Automated system monitoring scripts (Python), improving issue detection time by **20%** and ensuring **99.9% uptime** for critical healthcare applications. Collaborated with cross-functional teams in Agile sprints to deploy HIPAA-compliant solutions, accelerating release cycles by **10%**.

Dell - Campus Ambassador October 2020 - May 2021

- Organized and led 5 technical workshops and promotional events focused on Dell technologies, engaging **1,000+ students** and driving a **40% increase** in participation in campus events.
- Created data-driven outreach campaigns that boosted student sign-ups for Dell's developer program by **35%** in 6 months.

Sparks Foundation - Software Development Intern September 2020 - October 2020

- Developed and optimized React-based front-end framework, improving user navigation efficiency by **20%** and reducing page load time by **1.2 seconds**.
- Automated data preprocessing for **5 M+ records** using Python, boosting pipeline accuracy by **30%** and saving **15 hours/week** of manual effort.
- Actively participated in Agile sprints, contributing to code reviews and collaborative problem-solving, which enhanced overall team sprint velocity by **10%**.

Publications

Categorization of Integumentary System Disorders using Deep Learning

- Developed a TensorFlow/Inception v3 model achieving **92% accuracy** in classifying skin diseases from **15,000+** medical images.
- Implemented data augmentation techniques, increasing dataset size by **40%** and improving model generalizability for clinical use.
- Published in an **IEEE** conference, contributing to the field of medical image analysis.

Assessing Exoplanet Habitability through Data-driven Approaches: A Comprehensive Literature Review

- Synthesized **50+ studies** on exoplanet habitability, identifying key trends in machine learning and statistical methods for planetary analysis.
- Highlighted gaps in existing research, influencing **3 subsequent NASA-funded** projects focused on AI-driven habitability modeling.

Unraveling the Equifax Data Breach: Lessons Learned and Strategies for Robust Cybersecurity

- Analyzed the **2017 Equifax** data breach, focusing on vulnerabilities and cybersecurity strategies. Offered best practices for **proactive measures** like patch management and employee training.
- Contributed to the **broader discourse on data security** in digitized landscapes.

Projects

The React Storm: A Dynamic Weather Application November 2023 - February 2024

- Architected and developed a dynamic web application using React, integrating external APIs (OpenWeatherMap, Google Maps) for real-time data fetching and display, achieving **18% higher user engagement** through real-time updates.
- Reduced API response time by **12%** using caching mechanisms and deployed via Docker, ensuring **99.9% uptime** during peak traffic.

Enhancing the Fresno State Digital Landscape: A User Experience Transformation Sep 2022 - Dec 2022

- Conducted user research and system analysis involving over **500+** participants.
- Identified and resolved **8 critical** performance bottlenecks, cutting page load time by **30%**.
- Presented data-driven redesign proposals leading to the implementation of three key feature enhancements, measurably improving user satisfaction by **25%**.

Categorization of Integumentary System Disorders Using Deep Learning September 2021 - April 2022

- Built and trained a deep learning model (TensorFlow, Inception v3), achieving **92%** accuracy in classifying skin diseases from medical images.
- Managed and preprocessed a large dataset of **15,000+ images**, implementing data augmentation techniques that increased effective dataset size by **40%** for improved model robustness.

Elegant Logistics Management System Empowered by Angular October 2021 - November 2021

- Developed a full-stack logistics platform using Angular 12 and Firebase, automating **40% of manual workflows** and reducing data entry errors by **35%**.
- Integrated real-time synchronization and secure authentication, ensuring **100%** data consistency across **800+** distributed users.

The Opulent Slots: Refined Parking System June 2020 - July 2020

- Built a web-based parking system with Twilio API integration, enabling SMS/WhatsApp notifications for **1,000+** daily users.
- Post-launch analysis showed a **28% increase in user engagement** and a **20% reduction** in parking conflicts compared to manual systems.

Certifications

Microsoft Certified: Azure Fundamentals November 2024

Education

Eastern Illinois University MS in Computer Technology, 4.0 CGPA August 2022 - May 2024

Computer Architecture, Advanced Software Engineering, Advanced Computer Security, Advanced Database Technology, Human-Computer Interaction

Sathyabama Institute of Science and Technology B.E in Computer Science and Engineering, 8.74 CGPA August 2018 - May 2022

Operating Systems, Data Structures and Algorithms, Computer Networks, Machine Learning, Android Development