

Komal Venugopal Vattumilli

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Education

Master of Science in Computer Software Engineering

Aug 2023 – May 2025

San Jose State University, United States of America

GPA: 4.00/4.00

Course Work: Distributed Systems, Data Mining, Software Systems Engineering, Python Programming, Cloud Computing, Data Structures & Algorithms, Database Management Systems, Web Programming, Big Data, Machine Learning

Technical Skills

Tech Stack: Java, Scala, Python, C++, JavaScript, TypeScript, HTML, CSS, PHP

Web Technologies: React.js, Angular, Node.js, Spring Boot, Flask, GraphQL, Mocha, Junit, Mockito, Swagger, REST API

Cloud and Databases: Amazon Web Services (AWS), Microsoft Azure, Mongo DB, MySQL, PostgreSQL, Redis

DevOps: Git, Jenkins, Docker, Kubernetes, Ansible, Linux, Maven, Artifactory, Micro Services

Experience

Software Development Engineer | Headout

Mar 2023 – Jul 2023

- Transitioned company's high-traffic booking system from Java to a more efficient Node.js environment, which streamlined backend processes, enabling the handling of a substantial increase in concurrent bookings and contributing to a notable improvement in server response times.
- Revamped user interface using TypeScript and React, increasing user engagement by 30% and booking completions by 20%.
- Developed a GraphQL API that cut data payloads by 40%, boosting server efficiency. Managed AWS infrastructure with container and serverless tech, reducing costs by 25% and achieving 99.9% uptime.
- Established a Jenkins CI/CD pipeline, integrating with Artifactory to enable daily feature deployments with zero downtime, and oversaw Kubernetes cluster administration to ensure service availability.

Software Development Engineer | Jivox Corporation

Jan 2021 – Mar 2023

- Spearheaded the development of a comprehensive session management system leveraging MERN stack, Redis which enhanced user experience and security, resulting in a 15% increase in user retention and engagement.
- Engineered secure authentication mechanisms, including JWT implementation and Redis for session management, significantly reducing security breaches by 80% and enhancing compliance with industry-standard security protocols.
- Simulated Facebook mock-server environment tailored for advertising test runs, achieving a 30% boost in ad rollout effectiveness and documented a comprehensive suite of RESTful APIs using Swagger.
- Conducted extensive unit and integration testing, including penetration testing to identify and mitigate vulnerabilities, ensuring robust application performance while managing Jenkins CI/CD pipelines for efficient deployment on AWS.
- Trained 20+ juniors and Awarded Above & Beyond Individual, Above & Beyond Team, Mountain Mover, Spot [Awards](#).

Software Development Engineer Intern | Efftronics Systems Pvt Ltd

May 2019 – Jun 2019

- Implemented a comprehensive traffic monitoring system, integrating a React-based frontend with a Flask-powered RESTful API backend, utilizing Microsoft Vision API for real-time image analysis.
- Analyzed image data from CCTV to train YOLO-based model for extracting vehicle count by converting to PCUs. Performed Linear, Exponential, and Random Forest models to predict green time with a min 0.06 RMSE value.

Projects

Movie Booking Portal | Node.js, React.js, MongoDB, Express, Microsoft Azure | [Git](#)

- Delivered a MERN Stack-based user-friendly interface for theater management with robust features like user authentication, ticket booking, and an analytics dashboard. Formulated 0% unauthorized access using JWT, bcrypt encryption and RBAC.

Mask Violation Detection System | AWS, React, Flask, OpenCV, MYSQL | [Publication](#)

- Engineered a full-stack web application to monitor mask compliance in public spaces; integrated AWS SNS and Lambda for instant alerts, resulting in a 40% increase in mask guideline adherence and enhancing public health safety measures.

Immigpt | React, Node.js, DynamoDB, Python, AWS, GCP, Large Language Models | [Website](#)

- Crafted a state-of-the-art web portal using advanced large language models and machine learning, significantly cutting response times by 50% and boosting user satisfaction by 60%, thereby streamlining international immigration processes."

Achievements

Research Publications : [Smart Guidance System for Blind](#) | [Program Slicing Techniques](#)

Hackathons : Secured first place in the Headout-AI Hackathon for developing an AI chatbot powered by OpenAI GPT-3.5-Turbo model and large language models. | RunnerUp Jivox Byte Riot Hackathon for automating QA activities.

Personal Projects : Student Ambassador - (Adobe) | [SoCalledHappenings \(Website\)](#) - [Instagram](#) | [ISO-SJSU \(Website\)](#)

Certifications : Azure-900, Certified Kubernetes Administrator, AWS Certified Solutions Architect Associate