SUKRUTH KESHAVARAM MOTHAKAPALLY

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EDUCATION

Northeastern University - Boston, MA   Sept 2022 - Dec 2024
Master of Science in Computer Software Engineering   GPA: 3.8
Relevant Courses: Data Structures and Algorithms in Python and Java, Cloud Computing, Big Data, Parallel Computing.

Visvesvaraya Technological University - Bangalore, India   Aug 2016 - June 2020
Bachelor of Engineering in Computer Science   GPA: 3.0
Relevant Courses: Java and Python App Programming, Database Management, Object-Oriented Concepts, Data Structures

WORK EXPERIENCE (~ 2.5 years)

Graduate Teaching Assistant – Northeastern University (Python, Java, Data Structures, OOP)   Jan 2023 - Dec 2024
- Designed and graded assessments for **40+** students in Data Structures and Algorithms including **Software Engineering** best practices.

Software Engineer Intern – PipeIQ.ai, Palo Alto, CA **(Python, AWS, SQL, React, TS, Node.js)**   Jan 2024 - Aug 2024
- Member of a **startup's** founding engineering team, taking **ownership** of multiple **microservices** using Python and Node.js, leveraging RESTful APIs and AWS (Lambda, DynamoDB, S3), accelerating **MVP** launch by a **quarter**.
- Developed a dynamic **user interface** with React, Next.js, and TypeScript, enabling cross-stack features like authentication, content delivery, and payment processing, boosting user engagement by **40%**.
- Designed database schemas; built a web-scraping tool; Created **POCs** with **design architectures** for new product features.
- Engineered a multi-agent **AI Copilot** with custom fine-tuned **LLMs** to automate marketing workflows, driving **revenue**.
- Led **migration** of monolithic backend to **scalable** microservices architecture using Docker, Terraform, and Ansible.

Systems Engineer – Infosys (client - Intel), Bangalore, India **(Python, C++, SQL, CICD)**   Dec 2020 - June 2022
- Developed **Intel driver** deployment solutions in C++ on Linux, leveraging **automation tools** and configuration management.
- Built automated Python **testing frameworks** for SSD firmware on Linux, boosting system performance by **15%**.
- Conducted **root cause analysis** on driver performance using SQL, identifying and mitigating production issues.
- **Re-engineered** driver deployment process with Python and Shell scripting, reducing update time by **30%** for **1M+ users**.
- Optimized **CI/CD pipelines** with Jenkins and Git, improving code quality in driver deployment workflows.

Full-Stack Developer Intern – Infosys, Mysore, India **(JavaScript, MERN, Agile)**   Feb 2020 - Mar 2020
- Collaborated on **backend development** using Node.js, Express.js, and MongoDB for an employee skills analysis platform.
- Developed React components and integrated JavaScript for **real-time** data visualization on the platform.

Software Developer Intern – Bosch, Bangalore, India **(Python, Node.js, REST, AWS)**   July 2018 - Aug 2018
- Contributed to Python and Node.js backend services for a **shipment tracking app**, integrating RESTful APIs with **30+ endpoints**.
- Optimized SQL/NoSQL queries, improving shipment data processing by **30%**, and deployed a **Dockerized** app on AWS.

ACADEMIC PROJECTS

Personalized AI Job Tracker – Full-Stack App (Python, FastAPI, JavaScript, Postgres, AWS, CI/CD, Docker, LLM)
- Developed a **multi-agent AI**-powered **Chrome extension** to automate job tracking using JavaScript and FastAPI.
- Deployed on AWS using Docker, with CI/CD automation via GitHub Actions, ensuring **scalability** and reliability.

Cloud Native Web App with Scalable Architecture (AWS, Python, Flask, GitHub Actions, Terraform, Packer)
- Developed and deployed Python-based **REST API** on AWS with load balancing, auto-scaling, and logging for scalability.
- Automated CI/CD via GitHub Actions, used Terraform for infrastructure as code, and integrated pytest for reliability.

Task Prioritization App with Cloud Deployment (React.js, HTML, CSS, Firebase, AWS)
- Built a React.js and Tailwind CSS **productivity app**, deployed on AWS EC2, reducing task delays by **30%**.
- Developed a **task scheduler** with Interval Scheduling, Priority Queues, and Firebase, saving **20%** time for **50+ users**.

AI-based Stack Overflow Full-Stack App (Python, LLM, Airflow, Docker, FastAPI, CI/CD, GCP)
- **Led a team of 3** to build a Dockerized Python app, integrating **GenAI** (RAG, text generation, summarization) into Stack Overflow.
- Built a **data pipeline** with Airflow, deployed on GCP, using FastAPI for backend and Streamlit for UI, ensuring efficiency.

TECHNICAL SKILLS

- **Programming** - Python, Java, JavaScript, TypeScript, C++
- **APIs | Architectures** - RESTful APIs, GraphQL, JWT, Microservices, Serverless, MVC, System Design
- **Backend Frameworks** - Flask, FastAPI, Django, Node.js, Express.js, Spring Boot
- **Frontend Technologies** - React, Redux, Next.js, Angular.js, HTML, CSS, Bootstrap, SASS/SCSS
- **Databases** - SQL (PostgreSQL, MySQL, SQL Server), NoSQL (MongoDB, Redis), Elasticsearch
- **Cloud Computing** - AWS (EC2, S3, RDS, IAM, SQS, Lambda, ECS), GCP (CloudSQL, GCS, Pub/Sub)
- **Devops | CI/CD** - Git, GitHub, GitHub Actions, Jenkins, Docker, Terraform, packer, Kubernetes