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, REST, 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** services like Lambda, DynamoDB, and S3, accelerating **MVP** launch timeline by 30%.
- Developed a dynamic and interactive **user interface** with **React, Next.js**, and **TypeScript**, enabling cross-stack features like authentication, content delivery, and payment processing, resulting in a **40%** boost in user engagement.
- Engineered database schemas, built web-scrapping tool for enhanced data collection and created POCs for new product features.
- Built CI/CD pipeline via GitHub Actions, achieving 85% test coverage with unit and integration testing, improving deployment efficiency.
- Spearheaded migration of monolithic backend to a scalable microservices architecture using Docker, Terraform, and Ansible.

Systems Engineer – Infosys (client - Intel), Bangalore, India (Python, C++, SQL, CICD, Testing) Dec 2020 - June 2022

- Developed **Intel driver** deployment solutions in C++ on **Linux**, leveraging **automation** tools and **configuration** management techniques.
- Built automated **testing** frameworks in **Python** for **SSD firmware** on Linux, enhancing **system** reliability and performance by 15%.
- Performed root cause **analysis** of driver performance metrics and **logs** using **SQL**, identifying and mitigating **production** issues.
- Re-engineered driver deployment process with Python and Shell scripting, reducing driver update time by 30% for 1 million+ users.
- Optimized **CI/CD** pipelines with **Jenkins** and **Git**, improving code quality and reliability in driver **deployment** workflows.

Full-Stack Developer Intern – <u>Infosys</u>, Mysore, India (JavaScript, MERN, NoSQL, Agile) Feb 2020 - Mar 2020

- Collaborated on **backend** development using **Node.js**, **Express.js**, and **MongoDB** for a dynamic employee skills analysis platform.
- Developed interactive **React** components and integrated **JavaScript** to enable **real-time** data visualization on the platform.

Software Developer Intern – Bosch, Bangalore, India (Python, Node.js, REST, SQL, AWS) July 2018 - Aug 2018

- Contributed to **Python** and **Node.js** backend services for shipment tracking app, integrating **RESTful APIs** and supporting **30**+ endpoints.
- Optimized SQL / NoSQL queries, improving shipment data processing time 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, Git, Docker, LLM)

- Built AI-powered Chrome extension with JavaScript, automating job tracking and improving productivity through advanced data processing.
- Developed and deployed **REST APIs** with **FastAPI**, leveraging **NLP** and **LLMs** for job data analytics, enhancing **SQL** query responses.
- Orchestrated **end-to-end** deployment with **Docker**, **CI/CD** pipelines via **GitHub Actions**, and hosted on **AWS**, ensuring high availability.

Cloud Native Web App with Scalable Architecture (AWS, Python, Flask, GitHub Actions, Terraform, Packer)

- Developed and deployed Python-based REST API on AWS, integrating load balancing, auto-scaling and logging for enhanced scalability.
- Automated **CI/CD** with **GitHub Actions**, used **Terraform** for infrastructure as code, and integrated **pytest** for reliable deployments.

Task Prioritization App with Cloud Deployment (React.js, HTML, CSS, Firebase, AWS)

- Developed a **React.js** and Tailwind **CSS**-based productivity app deployed on **AWS** EC2, enhancing task delays by 30%.
- Built a task scheduler with Interval Scheduling and Priority Queues, integrated with Firebase, saving 20% time for 50+ users.

AI-based Stack Overflow Full-Stack App (Python, LLM, Airflow, Docker, FastAPI, CICD, GCP)

- Led a team of 3 to develop **Dockerized Python** app, integrating **GenAI** features (**RAG**, text generation, summarization) into Stack Overflow.
- Built data pipeline with Airflow, deployed app on GCP, using FastAPI for backend and Streamlit for UI, ensuring efficient workflows.

TECHNICAL SKILLS

- Programming
- APIs | Architectures
- Backend Frameworks
- Frontend Technologies
- Databases
- Cloud Computing
- Devops | CI/CD
- Parallel Computing
- Automation | Testing

- Python, Java, JavaScript, TypeScript, C++
- RESTful APIs, GraphQL, JWT, Microservices, Serverless architecture, MVC, System Design
- Flask, FastAPI, Django, Node.js, Express.js, Spring Boot
- React, Redux, Next.js, Angular.js, HTML, CSS, Bootstrap, SASS/SCSS
- SQL (PostgreSQL, MySQL, SQL Server), NoSQL (MongoDB, Redis), Elasticsearch
- AWS (EC2, S3, RDS, IAM, SOS, Lambda, ECS), GCP (CloudSQL, GCS, BigQuery, Pub/Sub)
- Git, GitHub, GitHub Actions, Jenkins, Docker, Terraform, packer, Kubernetes
- PyTorch, Spark, CUDA, OpenMP, Multi-threading, Multi-processing, Distributed Systems
- **ng** Selenium, JUnit, pytest, Unit Testing