SUKRUTH MOTHAKAPALLY

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Work Experience

AI Software Engineer   Feb 2025 - Present
PredictaBio Innovations, Brighton, MA (Python, REST APIs, Neo4j, Azure)
- Founding team **lead**, owning backend **product development** for a protein synthesis **startup**; Architecting multi-agent AI microservices, automated data pipelines, and graph + vector DBs for **ML**-driven predictive modeling and **POCs**.

AI Software Engineer   Jan 2024 - Aug 2024
PipeIQ.ai, Palo Alto, CA (Python, FastAPI, LLMs, AWS, Postgres, React, Node.js)
- 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 React/Next.js/TypeScript UI integrating auth, content APIs, and Stripe payments, driving **40%** engagement growth.
- 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.

Graduate Teaching Assistant   Jan 2023 - Dec 2024
Northeastern University, Boston, MA (Python, Java, Object Oriented Programming)
- Created and graded Data Structures and Algorithms assessments for **40+** students, including **Agile** and **SDLC** best practices.

Systems Engineer   Dec 2020 - June 2022
Infosys (**Intel**)**,** Bangalore, India (Python, C++, MySQL, CI/CD)
- 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%**.
- 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   Feb 2020 - Mar 2020
Infosys, Mysore, India (JavaScript, MERN, Agile)
- 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   Jul 2018 - Aug 2018
Bosch, Bangalore, India (Python, Node.js, REST, AWS)
- 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.

Personal Projects

Personalized AI Job Tracker – Full-Stack App (Python, FastAPI, JS, Postgres, AWS, CI/CD, Docker, LLM)
- Developed a **multi-agent AI Chrome extension** to automate job tracking, deployed on AWS with Docker and CI/CD.

Cloud Native Web App with Scalable Architecture (AWS, Python, Flask, GitHub Actions, Terraform, Packer)
- Built a Python/Flask REST API on AWS with load balancing and **auto scaling**, and CI/CD via GitHub Actions and Terraform.

Task Prioritization App with Cloud Deployment (React.js, Firebase, AWS, Interval Scheduling, Priority Queues)
- Developed a React.js app with interval/priority queue **algorithms** deployed on AWS, cutting task delays by **30%**.

AI-based Stack Overflow Full-Stack App (Python, LLM, Airflow, Docker, FastAPI, CI/CD, GCP)
- **Led a team of 3** to build a Dockerized full-stack app integrating multi-AI agents into **Stack Overflow**, deployed on GCP.

Technical Skills

- **Programming**   - Python, Java, JavaScript.
- **APIs | Architectures**   - RESTful APIs, GraphQL, Microservices, SOA, Serverless, System Design.
- **Backend Frameworks**   - Flask, FastAPI, Django, Node.js, Express.js, Spring Boot.
- **Frontend Tech**   - React, Redux, Next.js, Angular.js, HTML, CSS, Bootstrap, SASS/SCSS.
- **Databases**   - SQL (PostgreSQL, MySQL, SQL Server), NoSQL (MongoDB, Redis, Neo4j), Elasticsearch.
- **Cloud**   - AWS (EC2, S3, RDS, SQS, Lambda, ECS), GCP (CloudSQL, GCS, Pub/Sub), Azure.
- **Devops | CI/CD**   - Git, GitHub, GitHub Actions, Docker, Terraform, Kubernetes.
- **Parallel Computing**   - OpenMP, Cuda, PyTorch, Multi-threading, multi-processing,

Education

Northeastern University, Boston, MA   Dec 2024
Master of Science in Computer Software Engineering   3.8 / 4.0
Relevant Courses: Data Structures and Algorithms in Python and Java, Cloud Computing, Big Data, Parallel Computing.

Visvesvaraya Technological University, Bangalore, India   Sep 2020
Bachelor of Engineering in Computer Science and Engineering   3.0 / 4.0