SAHIL BODKE

Boston, MA, 02134| sahil2000bodke@gmail.com |(551)-344-8413 | GitHub | LinkedIn

EDUCATION

Northeastern University (Khoury College of Computer Sciences), Boston, MA **Sept 2022 – Dec 2024**
Master of Science in Robotics (Concentration: Computer Science) GPA 3.96/4.0
National Institute of Technology Silchar, Assam, India **July 2018 – May 2022**
Bachelor of Technology – Mechanical Engineering GPA 8.98/10.0

TECHNICAL SKILLS

Programming Languages: Python, R, C++, JavaScript, Java, MATLAB, Groovy
Cloud & DevOps: Azure, AWS (EC2, Lambda, S3, Batch, Sagemaker, Bedrock, Fargate, ECS, EFS, FsX, EBS, ECR), Serverless, Docker, GitHub, GitHub Actions, GitLab, CI/CD, NGINX, Linux
Frameworks & libraries: PyTorch, TensorFlow, Keras, OpenCV, NumPy, Pandas, Nextflow, Dash, Figma
Web Technologies: FastAPI, **Svelte**, React, Node.js, Express.js, Mongoose, REST API, HTML, CSS, Bootstrap, TypeScript
Databases: MySQL, MongoDB, PostgreSQL, Athena, RDS, DynamoDB, DuckDB
AI & Other Tools: **MCP, Claude Code, Cursor**, **Windsurf**, **Kiro**, Git, Tableau, VS Code, Postman, ROS

EXPERIENCE

UniBio Intelligence, USA (Software Engineer) **July 2025 – Present**
- Built and operated a **containerized microservices platform** deployed on Azure, supporting compute-intensive workloads with reproducible execution environments
- Designed infrastructure-aware backend services to execute long-running jobs with persistent state, failure recovery, and minimal operational intervention
- Optimized batch execution workflows with configurable concurrency and partial failure handling, enabling high-throughput processing while avoiding resource contention
- Reduced production incidents by introducing strict dependency pinning, safer process execution, and improved multiprocessing strategies for concurrent workloads. Improved developer productivity by optimizing container build workflows and local development environments
- Applied **AI-assisted development and test automation** to accelerate iteration while maintaining reproducibility and production stability

Ampersand Biomedicines, Boston, USA (Machine Learning Engineer Co-op) **Feb 2025 – July 2025**
- Designed and deployed scalable cloud infrastructure on AWS to support high-throughput batch workloads
- Optimized distributed job execution using AWS Batch, reducing compute time by **40%** and lowering infrastructure cost
- Automated endpoint provisioning and configuration using Python, reducing operational setup time by **30%**

Ampersand Biomedicines, Boston, USA (AI/Data Engineering Co-op) **Jan 2024 - Aug 2024**
- Architected **cloud-native data pipelines** using Docker, AWS services, and workflow automation tools
- Optimized distributed processing jobs to reduce memory usage and operational cost by 50%

PROJECTS

API Development Using Python (FastAPI, PostgreSQL, Docker, NGINX, JWT, GitHub Actions, Ubuntu) **July 2023**
- Designed and implemented a **production-style REST API** using FastAPI and PostgreSQL, supporting authenticated user-generated content with JWT-based security
- Containerized services with Docker, configured **NGINX as a reverse proxy**, and implemented a **CI/CD pipeline using GitHub Actions** to automate testing and deployment

Food Delivery App using MERN Stack (MongoDB Atlas, Express.js, React, Node.js, JavaScript, JWT) **May 2023**
- Built a **full-stack MERN application** enabling user authentication, order management, and secure data persistence using MongoDB Atlas
- Implemented **bcrypt-based credential hashing and JWT authentication**, ensuring secure session management and user data protection

ACHIEVEMENTS & CONTRIBUTIONS

- Co-authored and presented research on **A Fish Robot: It's Modeling and Pose Estimation** at: Presented at the 2021 International Symposium of Asian Control Association on Intelligent Robotics and Industrial Automation (IRIA)
- **Teaching Assistant** for **Programming with Data** course assisting students with assignments and labs across **2 semesters**
- Recipient of **'Assistance to Meritorious Students Scholarship – Junior Level'** for outstanding academic performance

COURSES & CERTIFICATIONS

AWS – AI Practitioner | Algorithms | Neural Networks and Deep Learning | Natural Language Processing | Pattern Recognition and Computer Vision | Human Computer Interaction