

SAHIL BODKE

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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
<ul style="list-style-type: none">Building a full-stack bioinformatics web platform on Microsoft Azure, integrating AI models (AbLang2, ESM-2, etc.) and implementing agentic MCP tools to orchestrate autonomous, multi-step antibody engineering pipelinesBuilt containerized microservices architecture using Docker and FastAPI, implementing RESTful APIs for computational biology tools including structure prediction, viscosity analysis, and sequence optimization, etc.Developed interactive SvelteKit web application featuring real-time job status monitoring, CSV/FASTA file uploads, and dynamic visualization, integrated with API routes for seamless client-server communication	
Ampersand Biomedicines, Boston, USA (Machine Learning Engineer Co-op)	Feb 2025 – July 2025
<ul style="list-style-type: none">Engineered and deployed scalable Generative AI models on AWS for antibody sequence analysis, automating endpoint configuration with Python/Boto3 to reduce setup time by 30%Implemented high-throughput AWS Batch pipeline, reducing computation times by 40% through optimized, distributed computing	
Ampersand Biomedicines, Boston, USA (AI/Data Engineering Co-op)	Jan 2024 - Aug 2024
<ul style="list-style-type: none">Architected and automated end-to-end single-cell RNA-seq pipelines using Nextflow, Docker, and AWS Lambda, cutting processing costs by 50%Engineered a gene expression analysis pipeline utilizing Dask for distributed computing, reducing memory consumption by 50% through optimized data handling in Parquet formatDeveloped interactive dashboards using Tableau to visualize gene expression data, facilitating data-driven decision-making	

PROJECTS

API Development Using Python (FastAPI, PostgreSQL, Docker, NGINX, JWT, GitHub Actions, Ubuntu)	July 2023
<ul style="list-style-type: none">Designed and implemented a secure API for user-generated content sharing using FastAPI, integrating PostgreSQL, incorporating JWT-based authentication to secure endpointsEstablished a robust CI/CD pipeline; containerized the application with Docker, configured NGINX as a reverse proxy, and automated the entire testing and deployment process using GitHub Actions	
Food Delivery App using MERN Stack (MongoDB Atlas, Express.js, React, Node.js, JavaScript, JWT)	May 2023
<ul style="list-style-type: none">Designed and developed a food delivery web application using the MERN stack to provide secure and interactive food ordering experienceBuilt an intuitive frontend with React and Bootstrap, and robust backend using Node.js and Express.js connected to MongoDB AtlasImplemented strong security measures, including bcrypt.js for user credential encryption and JWT for user authentication, ensuring data integrity and user privacy in the developed platform	

ACHIEVEMENTS & CONTRIBUTIONS

- A Fish Robot: It's Modeling and Pose Estimation: Presented at the [2021 International Symposium of Asian Control Association on Intelligent Robotics and Industrial Automation \(IRIA\)](#)
- Teaching Assistant** for 'Programming with Data' course for **2 semesters** assisting students with assignments and labs
- 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