

# SAHIL BODKE

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## EDUCATION

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

## TECHNICAL SKILLS

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

## EXPERIENCE

<b>UniBio Intelligence, USA</b> (Software Engineer)	<b>July 2025 – Present</b>
<ul style="list-style-type: none"><li>Building a <b>full-stack</b> bioinformatics web platform on Microsoft <b>Azure</b>, integrating AI models (AbLang2, ESM-2, etc.) and implementing agentic <b>MCP</b> tools to orchestrate autonomous, multi-step antibody engineering pipelines</li><li>Architecting containerized, AI-accelerated microservices using Docker and FastAPI, developing and maintaining RESTful APIs for computational biology tools including structure prediction, viscosity analysis, and sequence optimization</li><li>Implementing scalable, production-ready workflows spanning backend services, API orchestration, and results delivery, using AI-assisted coding, refactoring, and testing to iterate rapidly while preserving robustness and reproducibility</li></ul>	
<b>Ampersand Biomedicines, Boston, USA</b> (Machine Learning Engineer Co-op)	<b>Feb 2025 – July 2025</b>
<ul style="list-style-type: none"><li>Engineered and deployed scalable <b>Generative AI models</b> on <b>AWS</b> for antibody sequence analysis, automating endpoint configuration with Python/Boto3 to reduce setup time by <b>30%</b></li><li>Implemented high-throughput <b>AWS Batch</b> pipeline, reducing computation times by <b>40%</b> through optimized, <b>distributed computing</b></li></ul>	
<b>Ampersand Biomedicines, Boston, USA</b> (AI/Data Engineering Co-op)	<b>Jan 2024 - Aug 2024</b>
<ul style="list-style-type: none"><li>Architected and automated end-to-end single-cell RNA-seq pipelines using <b>Nextflow</b>, <b>Docker</b>, and <b>AWS Lambda</b>, cutting processing costs by <b>50%</b></li><li>Engineered a gene expression analysis pipeline utilizing <b>Dask</b> for distributed computing, reducing memory consumption by <b>50%</b> through optimized data handling in <b>Parquet</b> format</li><li>Developed interactive dashboards using <b>Tableau</b> to visualize gene expression data, facilitating data-driven decision-making</li></ul>	

## PROJECTS

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

## 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