Shruti Murarka

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EDUCATION

Georgia Institute of Technology   Aug 2024 - May 2026
Master of Science in Computational Science & Engineering   Atlanta, GA
Coursework: Algorithms, High-Performance Computing, Database Systems & Analysis, Data Analysis, NLP

Visvesvaraya National Institute of Technology, Rank: 4   May 2018 - July 2022
Bachelors of Technology in Electronics & Communication Engineering **9.08**/10 GPA   Nagpur, India
Coursework: OS, Machine Learning, Linear Algebra & Probability, Computer Architecture & Organization

EXPERIENCE

Bio-MIBLab, Georgia Tech   *Atlanta, GA*
Research Assistant - Advised by Prof. May Wang   *Aug 2024 - Present*

- Developing an automated **long input text summarization system** to condense clinical notes into concise summaries. Designing a **LLMs** pipeline that summaries outputs from **BERTSUM** (extractive) with **T5** (abstractive).

NatWest Group   *Bangalore, India*
Software Development Engineer   *July 2022 - July 2024*

- Developed an **orchestrator service** leveraging multi-threading techniques using **JAVA** and **Spring**, reducing API response time to **less than 100ns**, optimizing system performance for high-throughput transaction processing.
- Scaled a **REST API** using **Redis** to dynamically filter international transaction data using hashing techniques and advanced data structures to improve data retrieval efficiency by **30%**, reducing system latency in real-time operations.
- Led **Agile** cross-functional teams to migrate a mainframe job monitoring tool to a **React-based web app**, streamlining approval/rejection processes across **4 banking platforms** and supporting **60K** daily users.
- Implemented **CI/CD** pipelines using **Gitlab** to deploy on **Pivotal Cloud Foundry**, achieving a **15%** improvement in deployment speed and ensuring high availability through load balancing and auto-scaling.
- Containerized microservices with **Docker** and orchestrated them using **Kubernetes**, reducing infrastructure costs by **20%** while improving fault tolerance across multi-node environments and application scalability.
- Mentored **5** junior software developers on backend and front-end best practices and fostering continuous learning.

Detect Technologies   *Chennai, India*
Software Engineer Intern   *May 2021 - July 2021*

- Developed a data visualization dashboard using **Angular** & **MongoDB** database, improving decision-making speed by **25%** with live insights. Dockerized and deployed it on **AWS EB** with autoscaling and load balancing for scalability and high availability.

PROJECTS

ALPFA Recruitment | *Morgan Stanley's Code to Give Alpharetta Hackathon*   **Atlanta, GA, Sept 2024**

- Built a full-stack job matching platform with **Flask API, S3 bucket, Firebase**, and a **DistilBERT** model for candidate-job matching. Developed a responsive **React** & **Vite** frontend with **Google OAuth** for candidates, employers, and admins.

BuddyLoan - Your All-in-One Loan Application | NatWest Hackathon 2024   *Bangalore, IND*

- Engineered a scalable, user-centric loan repayment app with **Angular, MySQL, Spring JPA microservices, Netflix Eureka**, and **Open Banking APIs**, optimizing for fast load times, security, and intuitive design.

TECHNICAL SKILLS

- **Languages**: Java, Python, JavaScript, SQL, NoSQL, C / C++, Linux
- **Web TechStack**: React.js, Bootstrap, Angular, WebSDK, HTML, CSS.
- **Machine Learning Stack**: Keras, PyTorch, Tensorflow, Scikit Learn, Hugging Face, Matplotlib, OpenCV.
- **Libraries & Frameworks**: SpringBoot, JUnit, REST, Tyk, CI/CD, Rabbit MQ, Swagger, Flask, Firebase.
- **Tools & others**: AWS, Splunk, Docker, Git, Postman, Jira, Nginx, Figma, Visual Studio Code, SSH.

ACHIEVEMENTS

- **Publications**: Diagnosis of sleep disorders using CRNN, Classification of CAP sleep phases on various subjects
- **Hackathons**: Secured 2nd position at **Morgan Stanley's Code to Give Alpharetta Hackathon** | Secured 2nd position at **NatWest Challenge 23 Hackathon** | Awarded 'Business Acumen' and 'Innovation' honours in **NatWest Challenge 22 Hackathon**.
- **JN Tata Endowment Scholar:** Among **Top 100** students in **India** to receive merit scholarship for study abroad
- **Mentor** @ DeepLearning.AI | Convener @ IEEE, VNIT | Member @ Disha - India (NGO) | Teacher @ Wings