Fnu Pratichi

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EXPERIENCE

ICPC Foundation | Intern - Remote, USA   **May 2025 – Present**
- Participating in advanced, mentor-led sessions on **algorithms**, **data structures**, and **system design** to strengthen core software engineering skills

Northeast Big Data Innovation Hub | Data Science Researcher - Remote, USA   **October 2024 – January 2025**
- Conducted independent **research on 100K+ rows** from NYC Open Data, reduced preprocessing **errors by 30%** through **data cleaning** and **validation**
- Implemented ML techniques to **identify patterns in road usage** and traffic trends; **conducted bias assessments** and ethical guidelines, culminating in a **research poster** and Certificate of Completion from **Columbia University**

Amdocs Development Centre | Software Engineer (Experienced) - Pune, India   **December 2020 – October2022**
- Developed and optimized **Java-based backend** modules for Comcast's OSS and BSS systems; wrote and optimized Oracle **SQL queries** for large-scale **data migration** and validation, boosting **backend data integrity by 40%**
- Managed **CI/CD deployments** and environment configurations across **UAT** and **pre-production** using **Jenkins** and Linux, reducing **deployment failures by 30%** and enhancing release reliability

PROJECTS

Distributed-Event-Based-Architecture | Github | Python, Redis, Kafka, microservices   **April 2025 - May 2025**
- Designed a **distributed event-driven** backend using Kafka to coordinate asynchronous communication across **4 microservices** (orders, transactions, notifications), refining scalability and decreasing inter-service **latency by 45%**
- Orchestrated end-to-end service interaction with **RESTful APIs**, PostgreSQL for data persistence, **Redis for low-latency caching** (enhancing performance by 30%), and orchestrated workflows via CI/CD pipelines on AWS

Realtime Chat App Server | Demo | React.js, Node.js, MongoDB, Socket.io, JWT   **February 2025 - March 2025**
- Engineered a **real-time chat server** supporting **encrypted messaging**, media uploads, **profile picture update** and **online presence indicators**; upgraded Socket.io communication to reduce delivery **latency to under 150ms**
- Deployed responsive **UI with Tailwind** and Daisy UI, **Cloudinary** integration for file and **image handling**, and systematized continuous deployment on Render, enabling seamless updates with almost **zero downtime**

Full-Stack E-Commerce Platform | Github | Java, Spring Boot3, Angular, PostgreSQL   **January 2025 - March 2025**
- Crafted a modular e-commerce platform with **secure** user flows, **JWT-based** authentication, and a role-specific admin dashboard; processed **10,000+** mock transactions with less than **1% API failure** using Spring Boot and PostgreSQL
- Deployed scalable **microservices with Docker** on **AWS EC2** and CI/CD pipelines; integrated third-party **payment gateway** and Angular UI to **reduce load times by 25%** and ensure seamless checkout under high traffic

Admin-Student Management System | Demo | Flask API, Docker, AWS, Postman   **December 2024 - January 2025**
- Architected **RESTful API endpoints** using Flask to enable modular communication, ensuring seamless handling of **CRUD operations** for users and results, improved database read/write **efficiency by 40%** through **PostgreSQL RDS**
- Streamlined **deployment** leveraging **Docker containers** and implemented real-time monitoring with **AWS CloudWatch** and **Postman** testing for **API performance**, reducing **response time issues to 10%**

TECHNICAL SKILLS
- **Languages & Databases:** Python, Java, JavaScript, HTML/CSS, PostgreSQL, MySQL, NoSQL (MongoDB, Elasticsearch)
- **Frameworks & APIs:** Django, Flask, FastAPI, Spring Boot, Apache Kafka, WebSocket, RESTful APIs, Grafana
- **Cloud & DevOps:** GCP, AWS (EC2, S3, Lambda, SQS, API Gateway, ECR, Athena), Docker, Kubernetes, CI/CD, Linux
- **Other Skills:** Data Structures & Algorithms, OOPS, Operating Systems, Software Development, Terraform,Git

CERTIFICATIONS AND ACHIEVEMENTS
- Solved **200+ problems** on LeetCode showcasing strong **data structures** and **algorithms problem solving** skills
- AWS Cloud Foundation Certificate | Meta MySQL Certificate

EDUCATION

The George Washington University, GPA 3.77/4.0   **Washington DC, USA**
Master of Science in Computer Science, Recipient of SEAS Merit Award   **May 2025**