Snigdha Patil

LinkedIn: https://www.linkedin.com/in/snigdha-patil
Github: https://github.com/Snigdha8

Mobile: +1-934-799-0599
Email: snigdha.patil@stonybrook.edu
Leetcode: https://leetcode.com/yggins/

Education

Stony Brook University — Stony Brook, NY, USA
Master of Science in Computer Science; ***GPA:*** *3.78/4.00* — *Aug 2023 - May 2025 (Expected)*
Coursework: Algorithmic Problem Solving, Operating Systems, Data Science Fundamentals

Visvesvaraya National Institute of Technology — Nagpur, India
Bachelor of Technology in Computer Science and Engineering; ***GPA:*** *8.16/10.00* — *Jul 2016 - May 2020*
Coursework: Data Structures & Algorithms, Distributed Systems, Operating Systems, Database Management Systems, Object-Oriented Programming, Computer Networks

Skills Summary

Languages: Java, C++, C, Python, PostgreSQL, Oracle DB, HTML, CSS, JavaScript, OOP, OOA, OOD
Frameworks/Tools: Spring boot, Angular, Git, Junit, Datadog, Splunk, CI/CD, uDeploy, Jenkins, Terraform
Platforms: Linux, Windows, Kubernetes, Docker, AWS, SwaggerHub, Apigee API Platform

Work Experience

Fidelity Investments — Bengaluru, India
Software Engineer — *Aug 2020 - Jul 2023*

- Created a **Java microservice** leveraging multi-threading techniques to efficiently process pending payment orders, delivering a robust throughput of **3000 requests per second**.
- Designed and developed a **REST API** from inception to delivery to fetch, sort and filter brokerage and non-brokerage positions data that handles up to **2000 positions per request** for multiple user accounts.
- Built a **Spring Boot-based** backend service to retrieve patching data of 60 servers from an Oracle database, facilitating the development of a monitoring tool for patching activity. This initiative resulted in an **84-person-hour reduction** during each patching cycle.
- Implemented **CI/CD pipelines** using **DevOps tools** like **Jenkins** and **uDeploy** which led to more efficient software delivery cycles, improving **time-to-production by 37%**.
- Integrated **Docker-based** containerization with **Kubernetes** to automate the deployment, scaling, and management of applications, achieving a **40% improvement** in scalability and significant reduction in infrastructure costs.

Fidelity Investments — Bengaluru, India
Software Engineer Intern — *May 2019 - Jul 2019*

- Created a database on **Amazon RDS PostgreSQL** engine with GTC orders data belonging to 32 trading venues.
- Deployed **python** script using **AWS Lambda** function by connecting to **AWS API Gateway** to retrieve application data.

Projects

AI-MedRec: Medication reconciliation software using LLMs — *Jan 2024 - Present*
Research Project under ***Prof. I.V. Ramakrishnan****, Stony Brook University*

- Orchestrated text extraction using **Gemini Large Language Model (LLM)** for multiple modalities such as images, ED notes and handwritten clinical notes, and **AWS Transcribe API** for audio to text.
- Implemented preprocessing techniques to refine extracted text for enhanced accuracy, and designed the prompts to comprehend this text and generate the reconciled, structured medication list using **Gemini**.
- Developed backend **REST APIs** using **Django REST framework** to efficiently handle the user requests from Android application.

Hit Songs Sentiment and Stock Market Prediction — *Feb 2022 - Apr 2022*
AWS Deep Learning Hackathon Project

- Developed an **AI-driven** stock market prediction tool based on the sentiment of the Spotify daily top 200 songs.
- Used **BERT Model** tokenizer to pre-process the song lyrics and built a lyrics sentiment classifier.
- Fine-tuned the model and got a training **accuracy of 90%**.

Mid-day Meal Analytics System using Cisco Meraki MV Sense camera — *Apr 2020 - Aug 2020*
Smart India Hackathon

- Created a monitoring system by using the **Person Detection API** to count number of students getting mid-day meals.
- Performed food recognition using **MobilenetV2+YOLO** model to detect and classify Indian food items by processing snapshots taken by camera's Snapshot API to develop an auditing system.

Publications

- ***'Predicting stock market direction: Hit songs' sentiment analysis by using BERT':*** International Journal of Advanced Research, Ideas and Innovations in Technology(IJARIIT), (Volume 8, Issue 4 - V8I4-1201), 2022.

Honors and Awards

- ***AWS Deep Learning Hackathon Winner in 'Best Natural Language Processing Applications' category***
- ***Finalist in Smart India Hackathon 2020 (A National Level Hackathon):***
  Selected in the top 5 teams out of 45 teams across India for the problem statement - Mid-day Meal Analytics