# Soham Nag

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# EDUCATION

#### Master of Science in Computer Science

GPA: 4.0

Arizona State University, Tempe, AZ

August 2022 - May 2024

#### Bachelor of Technology in Electrical and Electronics Engineering

GPA: 8.6

National Institute of Technology Meghalaya, Shillong, India

August 2013 - May 2017

### TECHNICAL SKILLS

Languages: Java, Python, C/C++, JavaScript, TypeScript, HTML, CSS, SQL (PostgreSQL), MQL (MongoDB) Frameworks and Libraries: Spring Boot, Next.js, React.js, Node.js, Express.js, Django, Redux, Zustand

Misc: Git, Docker, Kubernetes, Ansible, Terraform, AWS (EC2, S3, Lambda, DynamoDB), Google Cloud, Firebase,

Supabase, Kafka, Mockito, JUnit, Selenium, Postman

#### Experience

# Graduate Research Assistant & Teaching Assistant

May 2023 – Present

Arizona State University

Tempe, AZ

- Development of a privacy preserving counterfeit identity document detection system and its corresponding dataset for a Department of Homeland Security funded research project of CACTUS Lab, ASU
- Teaching an in-database ML inference system to a class of 320 students as a Teaching Assistant for CSE 412 'Database Management'

# Graduate Student Assistant

August 2022 - May 2023

Arizona State University

Tempe, AZ

• Performed grading of assignments for a class of approximately 400 students for courses 'Principles of Programming Languages' and 'Engineering Blockchain Applications'

# Information Technology Coordinator and Operations Engineer

July 2017 – July 2021

Power Grid Corporation of India Limited

Shillong, India

- Collaborated with ABB Sweden for the commissioning of Asia's first 800 kV 3000 Megawatt high performance HVDC transmission facility in Assam (India) and acted as Team Lead for an execution team of 30 employees. The project improved the region's power reliability by over 20%
- Undertook routine testing and troubleshooting of company's internal IT network and network devices, reducing network vulnerabilities and network downtime

#### Engineering Intern

June 2016 – July 2016

Power System Operation Corporation

Shillong, India

- Worked on the SCADA system designed to monitor the Northeast Regional Electrical Grid
- Presented a case study to a body of managers on the Indian power market highlighting operational trade practices followed by countries in the Indian subcontinent and was awarded 'Best Presentation of The Cohort' by Chief Manager (Northeast Region), POSOCO

#### **PROJECTS**

### Spotify Clone Application | Next 13, React, Supabase, PostgreSQL, Zustand, Tailwind, Stripe API, Vercel

• Implemented user registration, authentication, song and album art upload, liked/disliked songs and music playback functionalities in a polished Spotify clone. Leveraged the efficiency of Supabase and Zustand for authentication and state management. Integrated Stripe API to enable secure monthly subscription payments. Deployed the project on Vercel for optimal performance.

#### **Trivia Application** | Java, Spring Boot, PostgreSQL, Postman

• Developed a trivia application containing separate microservices for CRUD operations on a question bank and generating a quiz for the user. Question bank is stored using PostgreSQL and services communicate using REST APIs

# Meal Detection System for Artificial Pancreas | Python, Pandas, Numpy, Sklearn, Scipy

• Designed and implemented a meal detection model to determine whether an individual has consumed a meal based on input insulin data. Leveraged Random Forest Classifier technique of supervised machine learning on a provided training dataset to create a model of 82% accuracy.