# Sadaf Ahmed

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### **EDUCATION**

## Amrita Vishwa Vidyapeetham

Coimbatore, India

Bachelor of Technology - Computer Science Engineering

Aug 2022 - May 2026

Courses: Algorithmic Thinking, Computer Programming, Advanced Programming, Database Management System, Object-Oriented Paradigm, Data Structures and Algorithms, Design and Analysis of Algorithms, Operating Systems.

## SKILLS

- Languages: TypeScript, JavaScript, C++, Java, Python, SQL.
- Frameworks: Node.js, RestAPI, FastAPI, Nextjs, MongoDB, Express, Springboot.
- Developer Tools: Git, Docker, Jenkins, AWS, VS Code.
- Platforms: Linux, MacOS, Windows

#### Internship Experience

## Google Summer of Code May 2024 - Aug 2024

Student Developer @Neutralinojs

**𝚱** Website

• Certificate

- Enhanced **test coverage** for 6 native APIs by adding over 1,100 lines of code, ensuring robust functionality and identifying critical edge cases.
- $\circ \quad \text{Resolved $\mathbf{CI}$ failures and introduced performance/concurrency tests, improving reliability on diverse environments.}$
- Authored a comprehensive guide for contributing test cases, improving onboarding for future contributors.

#### Arakoo.ai

Backend Developer Intern

Nov 2023 - Jan 2024

- Migrated the entire codebase from **NestJs to Hono.js**, enabling compatibility with WebAssembly (Wasm) and **achieving a 67% performance improvement**.
- Contributed over 40,000 lines of optimized code, ranking among the top 6 contributors in the organization.
- Designed and implemented an **npx command** for automated example generation, streamlining project setups and saving users an average of 30 minutes per setup.

### Seequenze Technologies

Jan 2023 - Oct 2023

Backend Developer Intern

• Certificate

- Reduced operational expenses by 99.46% by replacing GitHub Actions (\$7.68/hour) with Jenkins hosted on AWS EC2 Spot Instances (\$0.0416/hour).
- $\circ$  Conducted extensive **performance testing** using Apache JMeter, simulating up to 10,000 requests per second to identify and address scalability bottlenecks.
- $\circ$  Designed and implemented a **microservice architecture** using AWS SQS, efficiently processing up to 3,000 messages per second through advanced batching techniques.

### **PROJECTS**

# CarConnect ( GitHub ( Live ) Documentation

Nov 2024

Tech Stack: React, TailwindCSS, MongoDB, Express.js, Node.js

- o Project Overview: Full-stack car management app for seamless vehicle organization and assist in financial planning.
- Developed robust CRUD functionality for managing over 100 cars, including multi-image support and efficient data retrieval, improving user interaction.
- Integrated an EMI calculator, and optimized image uploads, reducing page load time by 20%.

# File Compressor (7) GitHub (1) Live

June 2024

Tech Stack: React, Node.js, MongoDb, Express.js, AWS

- Project Overview: A tool designed to compress large files and upload them to AWS S3 for efficient storage.
- Achieved an average compression efficiency of 47.22%, reducing a 36 MB file to 19 MB, optimizing storage space.
- Implemented AWS S3 file upload with an average upload time of 95ms per file, ensuring fast and reliable data storage.

#### GraphViz GitHub Live

June 2024

Tech Stack: ReactJs, Node.js, MongoDb, Express.js

- $\circ$  **Project Overview:** A web application that **visualizes graphs** and analyzes algorithm performance.
- o Optimized BFS algorithm performance with 4 nodes, achieving 47ms scripting, 48ms rendering, and 27ms painting.
- Optimized DFS algorithm performance with 4 nodes, achieving 31ms scripting, 39ms rendering, and 22ms painting.

#### ACHIEVEMENTS

- Hackathon: Achieved top finishes at North Shore Hacks (32 teams) and Code for Change (70 teams).
- Google Summer of Code 2024: Chosen from 43K+ applicants as one of the top 1K contributors.
- Configu: Acknowledged as an Open-Source champion at Configu for contributing 8 meaningful commits.
- Tooljet: Awarded the Trailblazer badge on GitHub for notable open-source contributions and active community engagement.