Aftaab Siddiqui

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Education

Nirma University, B.Tech. in Electronics and Communication Engineering   July 2018 – June 2022
- CPI: 7.81/10.0
- **Relevant Coursework:** Microprocessors and Microcontrollers, Computer Architecture, Machine Learning, Data Structures and Algorithms, Computer Networks, Computer Vision, DBMS

Work Experience

Tata Consultancy Services (TCS), GIFT City, Gujarat   Jan 2022 – June 2024

Systems Engineer   July 2022 – June 2024
- Designed and implemented **database schemas** and **REST APIs** for multiple essential systems using Spring Boot, ensuring efficient communication between frontend and backend components, and enhancing overall system functionality
- Resolved production issues and optimized backend performance through code and query improvements, adhering to best practices.

Software Engineer Intern   Jan 2022 – May 2022
- Developed interactive and customizable user interfaces using the **ZK framework** to enable real-time chart and report generation, enhancing user experience and data visualization capabilities.
- Utilized troubleshooting skills to **identify and resolve bugs and issues** in the backend systems, ensuring uninterrupted operation and reliability of applications, thus optimizing overall performance.

Blockchain Developer Intern, Inficube Technolabs – Remote   May 2021 – June 2021
- Developed a Python-based simulation of cryptocurrency network operations, focusing on **transaction processing**, **block creation**, and **blockchain validation**.
- Implemented cryptographic algorithms and data structures including **linked lists** and **dictionaries** to ensure **secure transaction** handling and maintain blockchain integrity

Projects

Drug Response Prediction Using Gene Expression Data   [Github]
- Developed a predictive model to analyze gene expression data and determine the potential drug response for different gene profiles.
- Implemented **machine learning algorithms** for **feature extraction**, **model training**, and **validation**.
- Tools used: **Python, Scikit-learn, Pandas, NumPy, Matplotlib**

IntelliPath   [Github]
- Created a pathfinding visualization tool to demonstrate the **A* algorithm** to find the **shortest path** between nodes.
- Enabled interactive selection of start and end points with user-defined obstacles.
- Tools used: **Python, Pygame**

DocuLens   [Github]
- Developed an application to detect and scan documents in real time using a camera.
- Applied **image processing** techniques such as **Gaussian blurring** and **Canny edge detection** for better document quality.
- Tools used: **Python, OpenCV, NumPy**

Skills

Languages: C/C++, Python3, Java, Golang, MySQL, JavaScript, TypeScript

Technologies: Numpy, Pandas, Scikit-Learn, OpenCV, Tkinter, Spring Boot, Flask, Nextjs, shadcn/ui, Vercel

Tools: Visual Studio Code, JetBrains IDEs, Git, Github, Vim, Tmux, Postman