Utkarsh Dev

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Education

Siddaganga Institute of Technology **December 2021 - June 2025**
Bachelor of Engineering in Computer Science and Engineering (CGPA: 8.33) *Tumakuru, India*

Experience

Purple Shorts **March 2025 - June 2025**
Full Stack Web Developer Intern *Bangalore, India*

- Developed dynamic web interfaces and interactive dashboards using **React.js** and **TypeScript**.
- Created scalable backend services with **Node.js** and **Express**, integrating third-party APIs and services.
- Deployed backend services to the **Azure App Service**, configured environment variables, and managed logs and scaling via the Azure portal.
- Thoroughly tested REST APIs using **Postman**, validating endpoints, error handling, and authorization logic.

Projects

Hacker News(Full Stack Project) | *TypeScript, Node.js, React.js, Hono, Prisma, Vercel* **Backend** **Frontend** **Website**

- Built a full-stack Hacker News clone with authentication, posting, liking, and commenting functionality using RESTful APIs and JWT-based auth.
- Developed the backend using **Node.js**, **TypeScript**, **Hono**, and **Prisma ORM** with a PostgreSQL database hosted on **SupaBase**.
- Designed a clean and responsive frontend with **React.js**, **Tailwind CSS**, and **React Router** to allow seamless user navigation and interaction.
- Deployed the application using **Vercel** for the frontend and **Azure Web App** for backend APIs, ensuring a smooth CI/CD pipeline and live accessibility.

Intrusion Detection in Banking Systems | *Python, Machine Learning, Deep Learning* **GitHub**

- Implemented a hybrid Intrusion Detection System (IDS) using machine learning and deep learning techniques to detect anomalies in banking network traffic.
- Utilized algorithms such as **Random Forest**, **XGBoost**, and **Decision Tree** to classify legitimate vs malicious transactions with high accuracy.
- Preprocessed large network datasets with feature engineering, normalization, and balancing techniques to improve model performance and reduce false positives.
- Visualized model performance using metrics like **precision**, **recall** and **confusion matrix** for comparative evaluation.

Glaucoma Detection using Deep Learning | *Python, CNN* **GitHub**

- Developed a CNN-based model achieving over 90 percent accuracy in detecting glaucoma from retinal images, enhancing early diagnosis capabilities.
- Designed an advanced image pre-processing pipeline incorporating normalization, augmentation, and segmentation techniques to improve model robustness and performance.

Student Management System | *C, Files* **GitHub**

- Developed a file-based student management system to efficiently handle student records, including addition, deletion, and updating of data.
- Implemented data persistence and retrieval functionalities using file handling techniques, ensuring reliable and secure storage of student information.

Railway Management System | *MySQL* **GitHub**

- Designed and implemented a Railway Management System utilizing MySQL to manage train schedules, bookings, and passenger information.
- Developed SQL queries and procedures to facilitate data retrieval, updates, and reporting, enhancing the overall functionality and user experience of the system.

Certificate

Advanced Data Structures and Algorithms - **GeeksforGeeks**

Data Structures in C++ - **Coding Ninjas**

Introduction to C++ - **Coding Ninjas**

Technical Skills and Interests

Languages: C++, C, HTML, CSS, JavaScript, Python

Databases:Mongodb, MySQL, SupaBase, Neon

Frameworks: Node.js, Express.js, React.js, REST API, Tailwind CSS

Tools: VS Code, GitHub, Postman

Relevant Coursework: Data Structures and Algorithms, Database and Management System with SQL, Object Oriented Programming, Operating System

Soft Skills: Communication, Teamwork, Problem Solving, Leadership Quality, Event Management

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