Aman Umrao

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Education

Shri Shankaracharya Technical Campus   **August 2021 – July 2025**
Bachelor of Technology in Information Technology   *CGPA 8.05*

Relevant Coursework

- Data Structures
- Artificial Intelligence
- Algorithms Analysis
- Database Management
- Operating System
- Computer Network
- Mathematics for CSE
- Intro to ML

Experience

Languify AI   **June 2024 – July 2024**
Software Engineer Intern   *Remote*

- Contributed to a live project in language modeling, implementing cutting-edge techniques, and contributing to a **10% reduction in language processing time** improving ASR system **efficiency by 20%**.
- Led the development of an innovative Automatic Speech Recognition (ASR) system, achieving a **20% improvement** in speech-to-text accuracy, enhancing the platform's performance.
- Utilized TensorFlow and PyTorch for model training and evaluation, ensuring robustness in various acoustic environments and achieving a **15% reduction** in **error rates**.
- Developed scripts to preprocess audio data and aggregate transcriptions, increasing **data processing** efficiency by 40%.

Projects

DDOS Attack Detection and Mitigation using ML | *Python, Mininet, Ryu Controller, Linux* - ⭘ **_GitHub_** April 2024

- Implemented Random Forest classifier ML algorithm to classify attacks and legitimate traffic with **97% accuracy** and detected DDoS attacks within 2 seconds using machine learning. Reducing **network downtime** by **80%**.
- Set up the network and wrote custom topology bash and **python scripts** to enable communication between hosts.
- Provisioned a Debian virtual machine to run on **Linux Environment** so that the program is able to run everyday automatically.

Live Docs | *React.js, Next.js, TypeScript, Tailwind CSS, Node.js, Liveblocks-Auth, ShadCN* - ⭘ **_GitHub_** December 2023

- Engineered a real-time collaborative document editing platform. Styled the UI with Tailwind CSS and ShadCN, providing a responsive design, enhancing user **productivity by 40%** with instant updates and low-latency synchronization.
- Employed Lexical Editor for rich text editing capabilities, achieving a **30% reduction in update delays**.
- Deployed Node.js as the backend and integrated Liveblocks for secure real-time **authentication**, resulting in **25% improvement** in document load and save times.

Cognitive Document LLM Aggregator | *Python, LangChain, Gemini Pro, Pinecone* - ⭘ **_GitHub_**   July 2023

- Designed an interactive document aggregation platform for improving data retrieval **efficiency by 35%**.
- Integrated Gemini Pro and Pinecone for advanced information retrieval and high-performance vector search, resulting in a **30% reduction** in **query response time** and a **40% increase** in document analysis accuracy.
- Leveraged LangChain to streamline the natural language processing pipeline, increasing processing **speed by 25%**.

Technical Skills

Languages: Proficient: C++, Python, HTML/CSS, JavaScript, Bash/shell scripting — Familiar: C, JAVA, SQL, LaTeX
Utilities: VS Code, Unix/Linux, Vim, Github, WordPress, Docker, Sublime Text, Postman Yarn, AWS
Technologies/Frameworks: ReactJS, ExpressJS, NodeJS, MongoDB, Firebase, Django, Selenium, Git

Achievements

- **ACM ICPC Asia West Regionalist** 2023 (**Rank 201** out of 5000+ teams)
- CodeChef **3 Star** Max. Rating [1645]
- GeekForGeeks Institute **Rank 1**
- Secured **AIR 91** and **Global rank 101** out of 32100+, STARTERS 129
- **1000+ problems solved** on various coding platforms [**_Leetcode_**, **_CodeChef_**, **_Codeforces_**, **_GFG_**, **_CSES_**]

Certifications

- AWS Cloud Solutions Architect Specialization
- Google Cybersecurity Professional Certificate
- Google IT Automation with Python Professional Certificate