

# Aman Umrao

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## Education

### Shri Shankaracharya Technical Campus

August 2021 – June 2025

Bachelor of Technology in Information Technology

CGPA 8.05

### Relevant Coursework

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

## Experience

### Languify AI

July 2024 – August 2024

Software Engineer Intern

Remote

- Contributed to a live project in language modeling, implementing advanced 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**.
- Created 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%**.
- Configured the network and wrote custom topology bash and **python scripts** to enable communication between hosts.
- Used Debian OS to run program on **Linux** environment for **testing** the system in SDN (**Software Defined Network**).

### Live Docs | Next.js, TypeScript, Tailwind CSS, Node.js, Liveblocks, Clerk-Auth    Live - GitHub    March 2023

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

### Cognitive Document LLM Aggregator | Python, LangChain, Gemini Pro, Pinecone    GitHub    December 2022

- Designed an interactive document aggregation platform for improving data retrieval **efficiency by 2x**.
- 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%**.

### Other Noteworthy Projects - ZED Type    Live    GitHub    || Share Bits Wirelessly    Live    GitHub

## Technical Skills

**Languages:** Proficient: C/C++, Python, SQL, HTML/CSS, JavaScript — Familiar: JAVA, Bash/shell scripting

**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]
- Codeforces pupil Max. Rating [1215]
- GeekForGeeks Institute **Rank 1**
- HackerRank **6 star** in problem solving
- **AIR 91 | Global rank 101/32181** in Starters 129
- Qualified **Meta HackerCup** Round 2 out of 21k+
- **1000+ problems solved** on various coding platforms [ [Leetcode](#), [CodeChef](#), [Codeforces](#), [GFG](#), [HackerRank](#) ]

## Certifications

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