Aman Raw
AI/ML Developer at Jio Platforms

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Education

Bachelor of Technology (B.Tech), Computer Science and Engineering	*Jul19 - May23*

Indian Institute of Technology Kanpur, Kanpur, India

Class XII (CBSE), Jawahar Navodaya Vidyalaya, Bundi, Rajasthan	*Jul17 - May18*

Percentage: 87.8%

Class X (CBSE), Jawahar Navodaya Vidyalaya, Firozabad, Uttar Pradesh	*Jul15 - May16*

CPI: 9.8/10.0

Scholastic & Curricular Achievements

- Secured All India Rank 6116 in JEE Advanced 2019 among 2.3 lakh candidates.
- Achieved All India Rank 9331 in JEE Mains 2019 with 99.2 percentile among 12 lakh candidates.
- Selected among 400 students from all JNV schools across India for Dakshana Selection Test (NDST) 2016.
- Awarded the Ratti Chhatr Scholarship by Panasonic (2019), selected among top 30 students from all 23 IITs.

Work Experience

Jio Platforms Limited | *AI/ML developer | backend developer*   *Aug23 - Present*

- Developed an automated PowerPoint generator using LLaMA 3.1 and 'python-pptx', powered by GenAI for content creation.
- Incorporated RAG for context-aware slides and custom LaTeX compilers for advanced formatting.
- Developed a comprehensive end-to-end lip-sync and expression-based Speaker 25fps video generation platform.
- Engineered two cutting-edge architectures for lip-sync and expression enhancement, driving a significant 30 % increase in video quality and accuracy in the generation of speaker videos at 25 frames per second.
- Applied a GAN-based network for lip mask generation, integrating a speaker identity encoder based on a stack of 2D CNNs for improved lip movement prediction.
- Engineered a multi-language speech generation system with voice cloning functionality for 13 Indian languages, leveraging Generative AI models and Stable Diffusion architecture.
- Combined reference speaker embeddings to extract voice features for cloning reference speaker's style and tone.
- Built and Enhanced the video generation platform with extensive use of FastAPI and PyTorch frameworks, enhancing performance and scalability for superior output.
- Contributed to the Jiomeet platform as a backend developer, implemented REST APIs using Node.js framework for 2 months.
- Added a robust language identification system using pre-trained transformer models and VoxLingua107 in video transcription.
- Optimized performance for 13 Indian languages, improving the accuracy and effectiveness of language detection.

Micron Technology Operations India LLP | *Firmware Engineer Intern*   *May22 - Jul22*

- Revamped Python tool for code standards verification, reducing manual code review by 85%.
- Refined RDTF testing framework, improving stubbing for independent domain testing for all 3 domains.
- Implemented 4 coding checks, including banning recursive functions, and contributed to code reviews to enhance quality and collaboration.

Projects

Smart Aquarium-IoT Project ⓖ   *Mar22 - Apr22*

- Designed real-time monitoring system for pH (6.8 - 7.8) and luminosity using Raspberry Pi and Arduino.
- Designed an automated water pH adjustment and brightness control system (10 - 20 lumen) using solenoid valves.
- Created mobile application for remote monitoring (24*7) of water quality metrics.

Django - DigiSchool IITK ⓖ   *Feb22 - Mar22*

- Crafted an engaging educational platform for 6th to 12th-grade students with a team of 10 members.
- Deployed communication system that combined course material accessibility with interactive discussion forums in version 2.0.
- Enhanced student-teacher interaction with integrated communication tools, such as announcement and chat functionality.

Technical Skills

- **Languages:** C, C++, Python, Octave/Matlab, Assembly, Java
- **Tools:** Git, Docker, LaTeX, Shell, vim
- **AI/ML frameworks:** PyTorch, TensorFlow, scikit-learn, Keras, GenAI, RAG, LLM
- **Backend development:** Node.js, MongoDB, MySQL, Django

Relevant Courses

- Data Structures & Algorithms
- Operating Systems
- Computer Networks
- Machine Learning
- Compiler Design
- Internet of Things