AYUSH SAUN

ayushsaun@gmail.com | (+91) 9667629472 | ayushsaun | ayushsaun24024

Education

Class X (CGPA: 9.6) — **Kendriya Vidyalaya, Vigyan Vihar**
April 2015 - March 2016 — *Delhi, India*

Class XII (Percentage: 85%) — **Kendriya Vidyalaya, Vigyan Vihar**
April 2017 - March 2018 — *Delhi, India*

B.Tech Electrical Engineering (CGPA: 7.84) — **Delhi Technological University**
Aug 2018 - June 2022 — *Delhi, India*

M.Tech Computer Science (CGPA: 7.69) — **IIIT-Delhi**
Aug 2024 - Present — *Delhi, India*

Experience

Software Engineer — *June 2022 – July 2024*
Samsung R&D — *Delhi, India*

- Maintained and updated corporate internal portal as a full-stack web developer, implementing front-end UI improvements and back-end functionality while consistently deploying critical content updates and managing 5+ production releases monthly, resulting in 99.8% website uptime
- Successfully developed and deployed a new portal, collaborating closely with the team to ensure seamless functionality.
- Contributed to upgrading the website interface, improving user experience and modernizing the design.
- Optimized backend systems, improving performance and reducing response times by implementing efficient solutions.
- Created a complete website interface, from front-end to back-end, for a hackathon idea, showcasing end-to-end development skills.

Projects

Classic ML Based Vocoder — *Aug 2024 – Dec 2024*
Technologies: Python, TensorFlow, librosa, Griffin-Lim Algorithm, STFT
Implemented ML-based vocoder for converting mel-spectrograms to high-quality audio using Griffin-Lim algorithm for phase estimation, achieving minimal distortion in reconstructed audio signals.

Single Object Tracking — *Aug 2024 – Dec 2024*
Technologies: Python, OpenCV, HOG, LBP, SIFT, ORB, Linear Regression, Random Forest
Developed a robust object tracking system integrating camera motion compensation, multiscale tracking and hybrid ML models, achieving 85% IoU and 0.92 R^2 score for accurate object position and size prediction.

Audio Deepfake Detection — *Jan 2025 – Apr 2025*
Technologies: Python, PyTorch, Transformers, speechbrain
Benchmarked diverse deep learning architectures including WavLM_Base, ECAPA-TDNN, and RawNet2 for audio anti-spoofing, achieving 6% equal error rate through extensive hyperparameter optimization and strategic audio augmentation techniques.

Automatic Speaker Verification System — *Jan 2025 – Apr 2025*
Technologies: Python, PyTorch, Transformers, speechbrain
Implemented speaker verification framework distinguishing target and non-target speakers by leveraging classification probabilities and residual phase features, achieving 30% tandem equal error rate through effective score-level fusion and feature extraction optimization.

Skills

Programming Languages: Python, C++, JavaScript, SQL, Typescript, Java

Frameworks & Libraries: PyTorch, TensorFlow, Speechbrain, scikit-learn, Transformer, SpeechBrain, React, Angular, Junit

Tools & Technologies: Git, Linux, AWS, MATLAB, LaTeX

Technical Areas: Audio Processing, Speech Recognition, Speaker Verification, Computer Vision, Machine Learning

Soft Skills: Problem Solving, Research, Technical Documentation, Project Management, Team Collaboration

Achievements & Activities

Technical Accomplishments:

- Cleared GATE (Graduate Aptitude Test in Engineering) examination with competitive percentile
- Successfully solved 100+ algorithmic problems on LeetCode, demonstrating strong problem-solving skills
- Passed Samsung's Code Competency Test, showcasing advanced programming proficiency
- Runner-up in company-sponsored hackathon, developing innovative solutions under time constraints

Academic Service:

- Served as Teaching Assistant for Introduction to programming and DBMS, assisting professor with grading and student consultations