HITESH GOYAL

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EDUCATION

Master of Science Artificial Intelligence — Expected Jul 2026
Nanyang Technological University, Singapore — 3.63 CGPA
College of Computing and Data Science

Bachelor of Technology in CSE with Specialisation in AI and ML — Jul 2023
Vellore Institute of Technology, Chennai Campus — 9.06 CGPA
School of Computing Sciences and Engineering

TECHNICAL SKILLS

Programming: Python, JavaScript, C++, Java
AI/ML Frameworks: TensorFlow, PyTorch, Scikit-Learn, Pandas
Specialized Skills: Deep Learning, Computer Vision, NLP, Audio Processing
Version Control: Git, GitHub
Deployment and Production: Docker, Binarization, Quantization, Pipeline Development

WORK EXPERIENCE

Tata Elxsi, Bangalore, India: Engineer, Artificial Intelligence — Jul 2023 - Jun 2024

- Optimized content moderation pipeline, enhancing multi-model AI processing speed through parallel computing.
- Implemented context-based advertisement placement in live broadcasts, at a speed of over 30 FPS.
- Developed industrial defect segmentation model with 80% accuracy using 30,000-point custom dataset.
- Improved project outcomes: 10x object tracking speed, 20% content moderation accuracy enhancement.

Corporate Gurukul, NUS, Singapore: Global Academic Intern *(Certificate)* — Dec 2022 - Jan 2023

- Secured an A+ grade in a rigorous Deep Learning boot-camp at the National University of Singapore.
- Guided a six-person team in developing helmet, vest detection models to ensure construction worker safety.
- Attained an accuracy comparable to 65% despite resource constraints in under a week.

Samsung PRISM, Bangalore, India (Remote): R&D Intern *(Certificate)* — Nov 2021 - Oct 2022

- Led a team of five in creating AI-powered Frame Rate Conversion models to enhance smartphone video quality.
- Achieved a Peak Signal-to-Noise Ratio (PSNR) of 27.9 on video resolution of 448x256 under resource constraints.
- Doubled the expected inference speed surpassing the required resolution by over 1.5x.

PROJECTS

Fuzzy Hybrid Model for Stock Trading *(Link to Project)*: — Sep 2024 - Nov 2024

- Created efficient feature engineering pipelines, improving loading and training speed by 10x.
- Performed data and domain analysis to reduce the number of input features by 5x, enhancing model performance by about 20%.
- Created relevant evaluation systems and algorithms to test the models fairly and effectively.

Reconstructed Phase Spaces in Speech Recognition *(Link to Capstone Thesis)*: — Sep 2022 - Apr 2023

- Utilised RPS feature extraction to obtain an impressive accuracy of 87% to classify 125 consonant-vowel pairs.
- Enhanced performance by combining RPS and MFCC features, resulting in an accuracy of 92%.
- Explored the application of combined RPS and MFCC features for end-to-end speech recognition, reducing the Word Error Rate to under 20% without using a language model.

Fake News Detection App *(Link to project)*: — Jan 2022 - May 2022

- Built and trained a robust fake news detection model using GloVe word embeddings and Artificial Neural Networks.
- Secured a significant test accuracy of 86% in the identification of fake news articles.