Yashwanth R

Artificial Intelligence & Machine Learning Student

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Professional Experience

Research Intern - AI for Music Digitization *Jul 2024 - Oct 2024*
University of Malaya Institute for Advanced Studies,Malaysia

- Developed AI-based Optical Music Recognition (OMR) system achieving 92% accuracy in digitizing historical musical sheets
- Implemented hybrid denoising algorithm combining CNN and FASTNLMEANS image processing, reducing noise by 40% in aged documents
- Designed segmentation pipeline using OpenCV and TensorFlow, improving staff line detection accuracy by 35%
- Integrated ABC notation converter for standardized digital output, enabling compatibility with 15+ music analysis tools
- Collaborated with musicologists to validate results on Primus dataset containing 10,000+ musical samples

Technical Projects

Musical Sheet Digitization Pipeline *Python, TensorFlow, OpenCV*

- Built end-to-end system for denoising, recognizing, and converting musical notation using CRNN with CTC loss
- Achieved 89% symbol recognition accuracy on handwritten sheets through data augmentation
- Optimized segmentation algorithm reduced processing time by 30% per sheet

E-commerce Application with Servlets *Java, Servlets, MySQL*

- Engineered a Java-based E-commerce application using Servlets, ensuring robust performance
- Executed a comprehensive system, resulting in a 25% reduction in order processing time
- Introduced features facilitating seamless browsing, purchasing, and returns, leading to a 40% increase in user engagement

Blog Website with ReactJS and Firebase *React, Firebase, HTML/CSS*

- Engineered a full-stack blog application utilizing React, Node.js, and MongoDB, enabling the creation, modification, and delivery of 500+ blog posts, enhancing content management efficiency by 40%.
- Implemented a real-time updates feature using WebSockets within a full-stack blog application, leading to a improvement in user engagement as measured by average session duration.

Education

M.Sc. Artificial Intelligence and Machine Learning **Nov 2021 - Jul 2026**
Coimbatore Institute of Technology CGPA: 7.89

Higher Secondary (XII) **2020 - 2021**
Sri Vijay Vidyalaya Matric Hr. Sec. School 92%

Secondary (X) **2018 - 2019**
Sri Vijay Vidyalaya Matric Hr. Sec. School 94.8%

Technical Skills

Machine Learning: TensorFlow, PyTorch, Scikit-learn, OpenCV, CNN, RNN architectures

Programming: Python

Web Development: React, Firebase, HTML,CSS, REST APIs, Servlets

Tools: Git, Docker, Jupyter

Certifications & Achievements

CSG - Data Journalism with Python (CSG Tech)

Google DSC - Summer Hackathon (Machine Learning Track)

KRIYA - App Development Workshop (PSG Tech)