Navabhaarathi

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I'm an AI specialist with a strong focus on computer vision and NLP, developing advanced solutions for real-time data analysis and machine learning. I excel in leading workshops, delivering expert talks, and applying AI to solve complex problems across various domains.

Experience

- **Research Assistant- School of Artificial Intelligence, Amrita University, Amritapuri** *Present*
  - Developed a web application leveraging AI-driven query management and RAG to optimize real-time student query handling with high precision and accuracy.
- **Software Development Intern- Napses Technology Pvt Lmt** *June to Auguest 2024*
  - Engineered a LangChain-powered social media bio generator, applying NLP and prompt engineering techniques.
- **Guest Lecturer-Tirupur Kumaran College For Women** *2022*
  - Delivered an expert talk on AI in Microbiology, covering ML, DL, and RL concepts, and showcased a Computer Vision model for microbial colony counting.

Education

- **Amrita School Of Engineering-Coimbatore** *2021-2025*
  - Bachelor of Technology, Computer Science (Artificial Intelligence)

Skills

- Programming Language: Python(Advanced), HTML, CSS, Javascript
- Tools: Visual Studio Code, Intel oneAPI, Git, Bootstrap, React, MongoDb
- Library: Pytorch, openCV, Sklearn, Pandas, mlflow, Numpy, Langchain,Huggingface
- Non-Technical Skills: Communication, Leadership, Presentation, Critical thinking, Creativity

Certification:

- **Machine Learning Math: Linear Algebra & Multivariate Calculus.**
- **SQL Advanced(HackerRank)**
- **Supervised Learning: Regression and Classification**
- **Reinforcement Learning With Matlab**

Project Work

- **LegalEase:**
  - Designed a legal case retrieval system integrating RAG, FAISS, and T5 models to provide relevant case judgments with concise explanations via a web interface. Incorporated BLOOM for multilingual support, enabling efficient legal research across diverse linguistic backgrounds.
- **RailTrack Guardian- (Intel AI Hackathon 4 position):**
  - **(2024)** Real-time railway track crossing detection system using YOLOv8 and OpenVINO, with web interface for remote monitoring. Placed 4th out of 1200 teams in hackathon.
- **Accent Classification Using Wav2vec (current):**
  - **(2024)** Accent classification system using wav2vec, neural networks, and PyTorch data augmentation, with speech enhancement for improved accuracy.

Professional Development And Leadership

- Workshops & Technical Contributions: Led Intel oneAPI, Docker, and Git workshops; developed Raspberry Pi face recognition; taught ML/DL basics to first years.
- House Captain: Led AIE, EEC, and CCE in athletics (2023-2024).