Viraj Induruwa

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Summary

IT undergraduate skilled in AI/ML, data science, and software development, with hands-on experience in Python, TensorFlow, Django, FastAPI, React, and PostgreSQL. Experienced in working with large datasets, building and deploying models, and developing backend solutions. Passionate about solving complex problems through AI and data-driven insights.

Skills

- **Technical Skills:**
  - **Programming Languages:** Python, JavaScript
  - **Web Technologies:** HTML, CSS, React, Django
  - **AI/ML Techniques & Integration:** Machine Learning, Deep Learning, Generative AI, Image Classification, Neural Networks, Hyperparameter Tuning, Feature Engineering, LLM Integration (Gemini API, OpenAI API, Hugging Face Transformers)
  - **Libraries & Frameworks:** TensorFlow, Keras, OpenCV, Tesseract OCR, YOLO, PyTorch, Scikit-Learn, Streamlit, FastAPI, Hugging Face
  - **Data Science Tools:** Pandas, Numpy, Matplotlib, Tableau, PowerBI
  - **Databases:** PostgreSQL, MySQL, SQLite
  - **Deployment:** AWS, Docker
  - **Testing & Tools:** Manual testing, Automation testing(basics), API testing, Test case development, Playwright, Postman
  - **Version Control:** Git, GitHub, Bitbucket
- **Soft Skills:**
  - Analytical thinking, Attention to detail, Adaptability, Problem-solving, Teamwork, Communication, Project management, Time management

Education

Horizon Campus *Feb 2021 – Current*
BSc(Hons) in Information Technology

- **Coursework:** Software Development, User Experience Design, Machine Learning, and Data Science.

Experience

Software Engineer Intern *Colombo, Sri Lanka*
Sri Lanka Telecom *Apr 2025 – Oct 2025*

- Developed backend solutions using **Python, Django, FastAPI, PostgreSQL, and Oracle** for enterprise applications
- Built a **console app to calculate sales incentives and dealer commissions**, streamlining complex calculation workflows for the Sales Incentive and Dealer modules
- Designed and implemented **user management functionality** integrating **Azure AD, Google Authentication, and JWT-based access control**

Publications

A Web Application for Personalized Book Recommendation Jan 2004

Viraj Induruwa, Dinusha Madhujith, Pawani Nimasha, Suresh Priyankara, Prasangi Weerasinghe

10.13140/RG.2.2.36308.72322

Projects

Plant Disease Detection Web App & FastAPI

- FastAPI app for plant disease detection using a deep learning model
- Streamlit web app for interactive plant disease detection
- Achieved accurate disease prediction with user- friendly interface
- **GitHub Repo:** github.com/Viraj-005/plant-disease-detection-fastapi
- **Live Web App:** plant-disease-detection-web-app.streamlit.app

Final Year Project: Cancer Detective Web App

- Built Django + React web app for early detection of skin, lung, and leukemia cancers using 30K+ medical images
- Achieved 93% (skin), 98% (lung), and 88% (leukemia) detection accuracy with deep learning models
- Tools Used: Django, React, TensorFlow, Keras
- **GitHub Repo:** github.com/Viraj-005/Cancer-Detective

OpenCV Projects – Computer Vision Applications

- Developed 5 projects: motion filtering, edge detection, OCR, text enhancement, and color detection
- Used Tesseract OCR, HSV color space, Gaussian blur, thresholding, and contour detection
- Tools Used: Python, OpenCV, Tesseract
- **GitHub Repo:** github.com/Viraj-005/opencv-projects

Skin Cancer Detection Web App (SmartSkin Scan)

- Streamlit app achieving 97.5% accuracy using EfficientNet-B3 and TensorFlow
- Trained on 200 images; optimized for improved classification
- **GitHub Repo:** github.com/Viraj-005/skin-cancer-detection
- **Live Web App:** smartskin-scan.streamlit.app

Cancer Detection API Development

- Deployed FastAPI-based cancer detection APIs (skin, lung, leukemia) on AWS Lambda
- Accuracy: 93% (skin), 98% (lung), 88% (leukemia); handled 100+ API calls in first week
- Tools Used: FastAPI, AWS Lambda, TensorFlow
- **Live Endpoints:** Skin, Leukemia, Lung

Book Recommendation Web App

- Django app providing ML-powered personalized book recommendations (20K+ ratings)
- Improved user engagement by 25% with interactive UI
- **GitHub Repo:** github.com/Viraj-005/book-recommendation-web-app