Laxman K R

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EDUCATION

Bachelor of Technology - Computer Science and Engineering   *September 2020 - May 2024*

Amrita Vishwa Vidyapeetham, Tamilnadu, India (*Amrita School of Computing*)

PROJECTS

Portfolio Website (View project)   *(August 2024)*
- Created a Next.js-powered website showcasing my experience, education, skills, projects, certificates, and contact details.
- Implemented React Server Side Rendering using Next.js App Router.
- Utilized PostgreSQL, Prisma, Blob, Tailwind CSS, and Vercel for database management, ORM, storage, styling, and deployment, respectively.
- Additionally, the portfolio website is available as a template in the GitHub release, enabling reuse and customization.

Lung Nodule Detection from CT Scans (View project)   *(May 2024)*
- Developed a series of Convolutional Neural Network (CNN) based models, including YOLOv5, DETR, and VNet, for the purpose of detecting complex and irregular lung nodules in computer tomography (CT) scans.
- Implemented a shape modeling algorithm and integrated it with the most effective model among the three, YOLOv5, to address the irregular and complex shapes commonly found in lung nodules.
- Successfully achieved an impressive accuracy rate of over 70% using the YOLOv5 model.

Android app for selling pre-owned products (View project)   *(October 2023)*
- Developed a native Android application using Kotlin and Jetpack Compose, integrating open-source on-device image classification and image description models.
- Leveraging the EfficientNet TensorFlow Lite model trained on the ImageNet dataset, the application achieved a 70% success rate in accurately classifying products.
- Additionally, the app incorporated an API-based pre-trained GPT-2 image captioning model, which aided in generating detailed descriptions for each product.

Generating News Articles for a title using Large Language Models   *(October 2023)*
- Finetuned two LLMs, Microsoft Phi 1.5 and Google Flan t5 XXL, a small scale (1.3B) and a large scale (11B) LLM using public datasets available in HuggingFace.
- Analyzed the two LLMs outputs and compared the LLMs architecture.
- Built a gradio web application to host and compare the large language model's output.

Parkinson's Disease Detection (View project)   *(November 2022)*
- Designed supervised and unsupervised models such as SVM, Random Forest, XGBoost, Logistic Regression etc… and trained on parkinson's disease dataset publicly available in kaggle platform.
- Achieved a highest accuracy score about 80% and the lowest about 65%, tested on ten supervised and unsupervised ML models, with supervised models generally having a higher accuracy score.
- Utilized the Python tools such as Pandas, Numpy, Matplot, Scikit in preparing and visualizing the dataset.

Leave Management System   *(June 2022)*
- Developed a web portal using React JS for frontend and Express JS for backend, which manages leave requests from the students and the respective handling of the requests by administration.
- Designed the database using UML, ERD, DFD diagrams and utilized MySQL in creating a relational database to store the details of students, staff and leave requests.
- Created multiple React components and implemented it via Lazy method which resulted in simplifying the code and increasing the overall performance.
- Followed and practiced Agile Methodology and tracked all the progress using Atlassian JIRA.

CERTIFICATION

- Advanced React *(Meta)*
- Programming Fundamentals in Kotlin *(Meta)*
- Fundamentals of Visualization with Tableau *(UC Davis)*

SKILLS

Languages: Python, Java, JavaScript, TypeScript, C++, C, Kotlin and Haskell.

Frameworks: Next.js, React, Node.js, Express.js, Tailwind CSS, LangChain, Pandas, TensorFlow and PyTorch.

Tools: PostgreSQL, MySQL, MongoDB, Firebase, Prisma, Vercel, Postman, Figma, Pandas and Tableau.

LEADERSHIP

- Head of a developer community in GitHub known as **A Developer Company** currently working on a cross platform billing app and a journal app cross platform mobile and web app.

PERSONAL DETAILS

Languages: English, Tamil (Native) and Telugu.

D.O.B: 19/08/2003