

# Tharindu Dhanushka

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/ [bit.ly/4fPjUYD](https://bit.ly/4fPjUYD)

## Summary

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Third-year Computer Engineering undergraduate at the University of Ruhuna with a strong foundation in machine learning, artificial intelligence, and web development. Proficient in designing intelligent systems, developing scalable web applications, and leveraging modern frameworks to solve complex problems. Adept at managing end-to-end software development lifecycles and applying innovative solutions to real-world challenges.

## Skills

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- Programming Languages: Python, C, C++, SQL, JavaScript
- Machine Learning Tools: TensorFlow, Scikit-learn
- Data Analysis: Pandas, NumPy, Matplotlib, Seaborn
- Front-end Development: React, Next, Tailwind CSS, Streamlit
- Back-end development: Node.js, Next.js, Django, Flask
- Databases: MySQL, PostgreSQL, SQLite, MongoDB
- DevOps: Linux administration, CI/CD, Docker, Jenkins, Computer networking.
- Tools and technologies: Postman, Git, Jira, Agile development.
- Data Structures and Algorithms, Software architecture, Project planning and management, and Strong communication skills.

## Education

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**University of Ruhuna, BSc (Hons) in Computer Engineering** **Mar 2022**

- **Related coursework:** Software project, Web development, Artificial Intelligence, DevOps Engineering, Machine learning, Computer Architecture, Data structures and Algorithms, Design patterns, Operating System programming,, GUI development, Embedded Systems, Object Oriented Programming, Databases.

## Experience

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**Junior Data Scientist (collaborator), Omdena Zambia Chapter - [Link](#)** **May 2024 – June 2024**

- Developed and Deployed Machine Learning Application For Omdena.
- Contributed to Data Collecting Part.

**Junior Machine Learning Engineer (Collaborator), Omdena Nigeria Chapter - [Link](#)** **Jun 2024 - Aug 2024**

- Developed and Deployed Machine Learning Application for Omdena.
- Contributed to create Machine Learning Model Using LSTM and Random Forest Regressor.

## Projects and Research

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**AI Plagiarism Detector(in Progress) -  [GitHub Link](#)**

- Developing a full-stack Django and React application with SQLite as Database
- Focusing on similarity checking using Cosine Similarity and pre-trained models like GPT for assignments and web content.

**Fire and Smoke Detection System with Arduino UNO(in Progress)**

- Currently developing a fire and smoke detection system simulation using Arduino UNO, MQ-2 gas, and flame sensors, with plans to implement the design using real-world components.
- Designed and tested the simulation in Proteus, showcasing sensor integration, Arduino programming, and system behavior for real-time fire and smoke detection.

### AI Chatbot with Memory Capabilities - [GitHub Link](#)

- Developed an intelligent chatbot using LangChain and Google's Gemini AI with MongoDB integration for persistent memory storage across multiple user sessions.
- Implemented multilingual support and deployed a responsive web interface using Gradio framework on Hugging Face Spaces, enabling seamless conversation in 5 different languages.

### QBot - PDF Query Answering Chatbot - [GitHub Link](#)

- **QBot** is an intelligent chatbot that answers user queries by extracting relevant information from uploaded PDF documents.
- The application uses LangChain, Hugging Face, and vector databases(Chroma) to deliver accurate and context-aware responses and Use Gradio as a Frontend.

### Restaurant Revenue Prediction Using Machine Learning - [GitHub Link](#)

- Built a machine learning model to predict restaurant revenue using historical data.
- Applied Random forest Regressor, Linear Regression for modelling and **Principal Component Analysis (PCA)** for dimensionality reduction to improve model efficiency.
- Tools Used: Scikit-Learn, Pandas, NumPy, Matplotlib, Seaborn




### Resume Analyzer Using AI and NLP - [GitHub Link](#)

- Developed a Streamlit-based frontend and Python backend with PostgreSQL for database management.
- Automated resume parsing using **PyResParser** and text extraction with **PDFMiner**.
- Tools Used: PyResParser, Pycopg2, Plotly, PDFMiner, Pandas

### Computer Store Ecommerce Website - [GitHub Link](#)

- Developed a responsive e-commerce web application using Next.js for the frontend and backend.
- Implemented database management with MongoDB

### Other projects

- Django Full Authentication System Using Django ,Next.js and PostgreSQL -  [GitHub Link](#)
- Chest Disease Detection and Classification using CNN(Resnet50) -  [GitHub Link](#)
- Student Registration and Module Enrolment Desktop Application -  [GitHub Link](#)

### Competitions

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- Ranked **778th globally** and **55th in Sri Lanka** at the **IEEEExtreme 18.0 Programming Competition** among over 8,700 teams worldwide.

### Certifications

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- DeepLearning.AI TensorFlow Developer by DeepLearning.AI on Coursera. Certificate earned at May 6, 2024 - [Link](#)
- Machine Learning with Python by IBM on Coursera. Certificate earned at May 17, 2024 - [Link](#)
- Dialogflow CX: Bot Building Basic - [Link](#)
- Neural Networks and Deep Learning by DeepLearning.AI - [Link](#)
- Introducing Multimodal Llama 3.2 by DeepLearning.AI - [Link](#)
- Building Your Own Database Agent by DeepLearning.AI - [Link](#)
- Building Agentic RAG with Llamaindex by DeepLearning.AI - [Link](#)

### References

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