# SARUJAN THIRUNAVUKKARASU

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### Profile \_

A motivated Computer Engineering student at the University of Jaffna with strong problem-solving and analytical skills. Experienced in programming, machine learning, and AI models. Eager to apply technical skills and contribute to realworld projects through an internship opportunity.

#### Education

#### University of Jaffna, Sri Lanka

April 2022 – Present

B.Sc.Eng (Hons) in Computer Engineering

• CGPA: 3.67/4.0 (up to 5th semester)

#### V/Vipulanantha College

2007 - 2020

G.C.E. Advanced & Ordinary Levels

• Advanced Level: Combined Mathematics: A | Chemistry: B | Physics: C

• Ordinary Level: 8 A's and B

# **Technical Strengths**

**Programming Languages** C++, Java, Python, MATLAB **Web Development** HTML, CSS, JavaScript

**Database Management** SQL **Version Control** Git, GitHub

**Machine Learning & Deep Learning** Pandas, Numpy, TensorFlow, scikit-learn, PyTorch, OpenCV

**Natural Language Processing** Hugging Face Transformers, spaCy, Unsloth, LLMs

# **Projects & Experience** \_\_\_

#### Participant - CODESTROM 2.0 Coding Competition

Aug 2024

Yarl IT Hub

• Solved algorithmic challenges in a competitive, team-based environment.

#### **Game Development (Personal Project - Python & Pygame)**

Nov 2024

• Learned to manage game states, user input, and animations.

github.com/Sarujan003 2

#### **AI Coding Assistant (Personal Project)**

July 2025

• Built an interactive coding assistant UI with Gradio, integrating Qwen2.5coder via Ollama's server. Implemented chat session state, streamed LLM responses, and user-friendly UX.

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• Technologies: Python, Gradio, Ollama, Kaggle GPU, Google colab, ngrok.

#### Al for Product Data Extraction (Personal Project)

July 2025

• Fine-tuned a Mistral-7B AI model to automatically extract key attributes like brand, color, and material into a structured JSON format.

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• Built a custom dataset and used memory-efficient QLoRA techniques to train the model.

• Technologies: Python, PyTorch, Transformers, Unsloth, PEFT.

## Final Year Research Project - Text Assistant for Product Search

University of Jaffna

- Developing an intelligent assistant to enhance product search accuracy in e-commerce platforms.
- Leveraging natural language processing (NLP) to interpret and process complex customer queries.
- Designing adaptive questioning to resolve query ambiguity and identify user preference.

# **Licenses & Certifications**

Fundamentals of LLMs ☑

June 2025

Ongoing

**Hugging Face** 

OpenCV Bootcamp ☑ OpenCV University

Oct 2024

Languages \_\_\_\_\_

**English** Professional Proficiency

**Tamil** Native

### References \_\_\_\_\_

#### Dr. Pratheeba Jeyananthan ☑

Head of the Department Dept. of Computer Engineering University of Jaffna pratheeba@eng.jfn.ac.lk

#### Dr. Jananie Jarachanthan ☑

Senior Lecturer Dept. of Computer Engineering University of Jaffna jananie@eng.jfn.ac.lk

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