

# GUNABALA DILAKSAN

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## PERSONAL STATEMENT

A motivated Computer Engineering undergraduate at the University of Jaffna, specializing in Data Science. Experienced in full-stack development, data science and machine learning with a strong interest in applying analytical skills to solve real-world problems. Passionate about gaining practical experience and contributing to impactful, innovative solutions in the fields of Software Engineering and Data Science.

## CAREER HISTORY

- **Completed internship at LankaElectricity Company(Pvt)Ltd.** 2025 Feb - 2025 Aug  
*Technologies: HTML, CSS, JavaScript, React.js, Node.js, Express, MongoDB, REST APIs*
  - Worked as a Frontend and Full-Stack Developer contributing to multiple internal systems. Developed and optimized responsive user interfaces using React.js, improving usability across devices and enhancing overall user experience..
  - Integrated REST APIs to enable efficient real-time data rendering and streamlined system communication.
  - Designed and implemented MERN stack components including authentication, CRUD modules, and backend services, ensuring smooth and reliable end-to-end functionality across the application.

## EDUCATION

- **University Of Jaffna** 2021 Jan - Present  
*BSc. Eng. (Hons.) in Computer Engineering* Jaffna, Sri Lanka
- **J/Skandavarodaya College** 2009 Jan - 2019 Aug  
*O/L: 7A2B, A/L: A2B* Jaffna, Sri Lanka

## PROJECTS

- **University In-Course Marks Management System** [🔗]  
*Technologies: Next.js, FastAPI, MySQL, REST APIs*
  - Developed a full-stack university marks management system with secure FastAPI-based REST APIs, role-based access for students and lecturers, efficient MySQL data management, and a responsive Next.js user interface for real-time in-course assessment viewing and management.
- **Satellite Imaging Based Agricultural Yield Prediction** [🔗]  
*Technologies: Python, CNN, TensorFlow/Keras, OpenCV, NumPy, Pandas*
  - Developed a CNN-based deep learning model to predict crop yield from satellite images, with preprocessing and analysis of remote sensing data for accurate forecasting.
- **Lecture Hall Booking System** [🔗]  
*Technologies: MERN Stack, Node.js, Express.js, MongoDB, React.js, REST APIs, Figma*
  - Developed a full-stack MERN booking system with secure Node.js/Express APIs, real-time room availability, optimized MongoDB data models, and a responsive React UI designed from Figma prototypes.
- **Gym Management System** [🔗]  
*Technologies: Next.js, FastAPI, MySQL, REST APIs, Docker*
  - Developed a full-stack gym management system with FastAPI-powered REST APIs, member and trainer management, subscription and payment tracking, efficient MySQL database design, a responsive Next.js frontend dashboard, and containerized deployment using Docker for scalable and consistent application environments.
- **AI Forecasting – Energy Sector** [🔗]  
*Technologies: Python, Scikit-Learn, Pandas, NumPy, Data Visualization*
  - Developed Python-based ML models for short-term and long-term electricity demand forecasting, integrating data preprocessing and visualization for accurate energy trend prediction.
- **High-Performance Tamil Spell Checker** [🔗]  
*Technologies: Python, NLP, PyTorch, Hugging Face*
  - Developed a lightweight AI-based Tamil spell checker using natural language processing techniques, optimized for fast and accurate detection and correction of spelling errors in real-world text, suitable for resource-constrained environments.
- **SaaS-Based Task Management System** [🔗]  
*Technologies: React, Node.js, PostgreSQL, JWT, Cloud Deployment*
  - Developed a full-stack task management web application with secure user authentication, real-time task creation and tracking, and role-based access control for Admin and Staff users, optimized for scalable cloud deployment.

## • Employee Management System

*Technologies: React, Node.js, PostgreSQL, Cloud Deployment*

- Developed a full-stack employee management system featuring employee profile handling, attendance tracking, and role-based access control, including an admin panel for centralized management. Designed for scalable cloud deployment and optimized for real-world organizational use.

## • Blogging Platform (Medium Clone)

*Technologies: Node.js, React*

- Developed a full-stack blogging platform featuring a rich text editor, tagging and advanced search functionalities, SEO-optimized article rendering, and an interactive comments system, designed to provide a smooth and responsive user experience.

## SKILLS

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- **AI Tools & Agent Skills:** Prompt engineering, LLM-based agent interaction, conversational AI, n8n workflows, basic LangChain, API integration
- **Programming Languages:** JavaScript, Java, Python
- **Web Technologies:** HTML, CSS, React, Node.js, Express
- **Database Systems:** MySQL, MongoDB
- **Data Science & Machine Learning:** ML, NLP, Hugging Face, Pandas, NumPy, PyTorch
- **Version Control:** Git, GitHub
- **Software Architecture:** RESTful API design
- **Soft Skills:** Quick learner, Problem-solving, analytical thinking, team collaboration

## RELEVANT ACADEMICS

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**Data Structures and Algorithms**  
**Natural Language Processing**  
**Database Systems**  
**Neural Networks and Fuzzy Logic**

**Operational Research**  
**Advanced Machine Learning**  
**Convolutional neural networks**  
**Program Construction**

**Data Visualization**  
**Operating Systems**  
**Applied Statistics**

## CERTIFICATIONS

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- Feature Engineering - Kaggle
- Intro to Machine Learning - Kaggle

## VOLUNTEER EXPERIENCE

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### • School Table Tennis Team

2012 - 2017

*Skandavarodaya College*

### • Tamil Union Member

2022 - Present

*University of Jaffna*

### • Vice Captain, Table Tennis Team

2023 - 2024

*University of Jaffna*

## REFERENCES

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### 1. Dr. (Mrs) P. Jeyananthan

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University of Jaffna  
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### 2. Dr. (Mrs) S.Jananie

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