





# Tharindu Gunarathne


Computer Science Undergraduate


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## Profile

Passionate about **AI, DevOps, Cloud Computing**, and **full-stack development**, with hands-on experience delivering scalable solutions. Freelance experience working with local clients to build high-quality software. **FOSS volunteer**, recognized in **hackathons for innovation**. Enthusiastic about digital audio programming, continuously exploring new ways to blend technology. Committed to **continuous learning, open-source contributions**, and driving impactful tech solutions.

## Professional Experience

### Full stack Developer

Apr 2024 – present

*Freelancer*

### Sathsara - Pharmacy Wholesale Distribution App - Live Site

Nov 2023 – present

*Full Stack Developer*

Developed an interactive application for wholesale **pharmacy distributors** to efficiently process, track, and manage pharmaceutical orders for retail pharmacies

**React JS | NextJS | Typescript | Tailwind CSS**

## Education

### Bachelor of Science - BSc(Hons)

May 2022 – present

*University of Kelaniya Sri Lanka*

Third Year Undergraduate - Specialization with Artificial Intelligence - **Current GPA: 3.85**

### Advance Level (G.C.E) 2020

Jun 2018 – Jun 2020

*Dharmaraja College*

Physical Sciences Stream - **Z-Score: 1.8497**

## Skills

### Languages

C/C++ | Python | JS | C# | SQL | PHP | Kotlin

### Frontend

React | NextJS | Redux

### Database

MySQL | PSQL | MongoDB | Supabase | Firebase

### AI Framework

Tensorflow | Pytorch | Langchain | Huggingface | Librosa

### Tools

Git | Docker | Kubernetes | nginx | Linux

### Cloud Servers



Oracle | AWS | Azure | GCP

### Backend

FastAPI | Django | Flask | Node | Springboot

## Projects

### ViewMO - E-Learning platform - Hackathon Project

- A comprehensive solution combining a **browser extension (Google Extention **) and a **web platform (npm Module **) for seamless content management and productivity.
- **Key Features:** Includes a **graph generator, custom chatbot maker, research guide agent**, and **MCQ generator** to enhance the learning experience.
- **Cross-Platform Integration:** Ensures efficient interaction and usability across both browser extension and web platform

### Medical Image Segmentation API

- Constructed a **FastAPI-based segmentation backend** using a U-Net model with a **ResNet-50** encoder with **86% accuracy**.
- **Deployed on GCP**, leveraging **Supabase for authentication and storage**.

- Processed **Kvasir-SEG dataset images**, enabling **efficient polyp detection** with endpoints for **image upload, segmentation, and retrieval**.

#### LIORA Voice Model

- Developed a **FastAPI**-based backend using **CNNs and MFCC features**, deployed on **AWS**.
- Designed **RESTful APIs** for emotion prediction from **speech**, integrating **AssemblyAI** for transcription.
- Optimized inference **speed**, enabling **batch processing and real-time analysis** for scalable emotion classification.

#### Mental Health Chatbot - 2nd Year Group Project

- Deployed a fully functional AI chatbot for **mobile and web platforms**, providing conversational mental health support.
- **Integrated NLP models** to **analyze sentiment** and deliver personalized guidance based on user interactions.
- Offers access to **100+ mental health resources**, ensuring reliable and scalable support.





#### QuizCast -Supabase 13th hackathon

- Designed an interactive **quiz platform** with a **Next.js frontend** and **FastAPI** backend.
- Incorporated **Supabase** for **authentication, real-time updates, and database management**.
- Implemented live leaderboards, quiz hosting, and participant interactions for an engaging experience.
- Deployed on **Vercel (frontend) and Azure (backend)** to ensure scalability and seamless performance.




#### Carnatic Raaga Classification API (Ongoing Project)

- Engineered a machine learning model utilizing **TensorFlow and Librosa** to classify **Carnatic raagas** from audio clips with **~94% accuracy**, enabling real-time music genre identification capabilities.
- Integrated a recommendation system to suggest the **top 10 songs** based on the identified raaga.
- **Future plans** include **API development, authentication, and YouTube/Spotify integration** for seamless music streaming.

## Certificates

- |   |   |
|---|---|
| • Oracle Cloud Infrastructure 2024 Generative AI Certified Professional  | • Oracle Cloud Infrastructure 2023 Certified Foundations Associate  |
| • CS50's Introduction to Artificial Intelligence with Python            | • Microsoft Certified: Azure AI Fundamentals                      |
| • Microsoft Certified: Azure Administrator Associate (Ongoing)  | • GitHub Foundations Certification (Ongoing)  |

## Awards

<b>IntelliHack 4.0 - University of Colombo School of Computing (UCSC)</b> 	Jul 2024
Team Vertex   Team Leader   Winners	
<b>IEEEXtreme 18.0 - IEEEXtreme</b> 	Nov 2024
Team Member   Global Rank: 255   Country Rank: 13   University Rank: 1	
<b>Genesis 24 - General Sir John Kotelawala Defence University</b> 	Aug 2024
Team Vertex   Team Leader   First runner-up	
<b>IEEEXtreme 17.0 - IEEEXtreme</b>	Oct 2023
Team Leader   Global Rank: 1522   Country Rank: 122   University Rank: 1	
<b>Junior-Hack 2023 - University of Kelaniya</b>	Jul 2023
Team BugCrushers   Team Leader   Top 10 Finale Selected	
<b>IntelliHack 3.0 - University of Colombo School of Computing (UCSC)</b>	May 2023
Team BugCrushers   Team Leader   Top 10 Finale Selected	

## VOLUNTEERING EXPERIENCES

<b>FOSS community at the University of Kelaniya - Vice President</b>	Oct 2023 – Oct 2024
<b>Computer Science Student's Association (UOK) - Member</b>	Sep 2022 – present
<b>UOK ISACA Student Group - Member</b>	Sep 2022 – Sep 2023