

# Thribhuvan Sunkavalli

Undergraduate

Seeking Opportunities

Indian Institute of Information Technology, Design and Manufacturing,

Kancheepuram, Chennai-127

## EDUCATION

### • IIITDM Kancheepuram

Bachelor of Technology, Electronics and Communication Engineering, Minor in ML

2021-2025

CGPA: 8.67

## EXPERIENCE

### • Teaching Assistant

IIITDM Kancheepuram

August 2024 - April 2025

Chennai

- TA for the course "EC2004: Digital Circuits Practice", involving the hardware and Verilog implementation of digital circuits using latches and flip-flops, async/sync counters, shift registers with ICs.
- TA for the course EC3005: Communication Systems Practice; Involving the simulation of various types of modulation techniques for transmission of information, such as AM, FM, PM, PSK, ASK, FSK using MATLAB Communication System Toolbox and HFSS.

### • Hardware Design for Embedded Systems Intern

Microlink Information Technologies (MLIT)

May 2024 - August 2024

Vijayawada

- Worked upon contributing for the design and development of an IrDA electricity meter scanner in a cost-efficient manner.

### • AI Intern

AICTE

May 2023 - September 2023

Remote

- Gained expertise in Image Processing, Signal Processing, Machine Learning and Deep Learning through using MATLAB, as a part of a Virtual Internship program offered by MathWorks and AICTE.

### • FRT Intern

AICTE

May 2023 - July 2023

Remote

- Learnt about various Azure Cloud Services, and gained hands-on-experience through interactive sessions during a Virtual Internship program in collaboration with Microsoft, AICTE, FutureSkills Prime, and affiliate partners GitHub, and Foundit.
- Developed a functional and interactive Restaurant Website as a part of my Internship Project.

### • Electronic System Designer

Mars Research Station, IIITDM Kancheepuram

April 2022 - January 2023

Chennai

- Technical Club in my Institute, where I collaborated with 19 students across all the disciplines to build an Autonomous Rover for Competitive Events such as ERC, ARC, URC.
- Worked on the design of Control Systems, Communication Systems and Power Electronics of the Rover.

## PERSONAL PROJECTS

### • Fake News Detection

LLM, Transformer

April 2025 - May 2025

- Fast and efficient transformer model for classifying news articles as fake or real.

### • BMI Prediction

ResNet50, CNN Pipelines

November 2024 - December 2024

- Attempt to predict BMI of a person using only their frontal and side-view facial images.

### • Skew Correction

RotNet, CNNs

March 2024 - April 2024

- Built a RotNet architecture-based Deep Learning model through TensorFlow to correct images that are slanted, or skewed, using CNNs in the architecture. Achieved a test accuracy of 82% on an augmented dataset of 1000 images.

### • Epilepsy Prediction

CNN, ResNet, Wavelet Transform, SCA, BSS, EMD

Feb 2024 - May 2024

- Developed a Deep Learning Model using CNNs for predicting epileptic seizures 10 minutes prior by utilizing EEG recordings, with an accuracy of 94%.

- **Path Finding Agent**

March 2024 - April 2024

Pygame, A\*, IDS, BFS, Python

- Simulated an AI agent picking up an item and delivering it to the goal destination in the shortest and cost-efficient path by implementing A\*, IDS, and BFS algorithms in Python, and utilizing Pygame library for visualization.

- **Automated Inventory Log**

Jan 2024 - April 2024

Yolo, esp32cam, Arduino, CV

- Automating Inventory Management by implementing multiple ESP32CAM Modules for capturing images, and processing them using CV to identify, quantify and localize items in a record file.

- **Primal-Dual Optimization**

Nov 2023 - Dec 2023

Algorithm for smoothening a non-smooth optimization function

- MATLAB implementation of Chambolle and Pock's Primal Dual Algorithm in conjunction with Tikhonov Regularization and a Gaussian Kernel for function generation.

- **Placements Analysis and Predictions**

Aug 2023 - Nov 2023

Python, Pandas, Matplotlib, Seaborn, Random Forest Regression

- Performed Data Analysis and applied ML models to analyze and predict placements statistics for my institution.

- **Restaurant Website**

May 2023 - July 2023

Azure Static App for Web Deployment, Azure Blob Storage for storing the website data

- Developed a functional and interactive Restaurant Website.

- **Encrypted Serial Communication**

Mar 2023 - Apr 2023

Arduino, cpp, encryption, ecc256

- A library to enable encrypted communications over serial ports.

## SKILLS AND INTERESTS

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**Languages:** Python, C++, C, Java, C#, HTML, CSS, JavaScript, SQL, R, Bash, PowerShell, Arduino, Verilog

**Softwares:** VSC, MATLAB, NI Multisim, NI LabVIEW, KeilVision, Arduino IDE, Auto CAD

**Frameworks/Libraries:** .NET, Angular, React.js, Node.js, Tensorflow, PyTorch

**Cloud:** Microsoft Azure, Amazon Web Services

**Soft Skills:** Hard-worker, Patient, Consistent, Disciplined

**Areas of Interest:** Signal & Image Processing, AI, ML, DL

## CERTIFICATIONS AND ACHIEVEMENTS

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- **Foundational C# with Microsoft**, Microsoft
- **Google Cybersecurity**, Coursera
- **Google AI Essentials**, Coursera
- **IBM Z Datathon**, IBM
- **JavaScript DSA**, freeCodeCamp
- **Responsive Web Design**, freeCodeCamp
- **Deep Learning Onramp**, MathWorks
- **Image Processing Onramp**, MathWorks
- **Signal Processing Onramp**, MathWorks
- **AWS Cloud Essentials**, Amazon
- **Intermediate Machine Learning**, Kaggle
- **Problem Solving Intermediate**, HackerRank
- **Web Development with Python and Flask**, Jovian
- **6 Gold Medals, 1 Silver Medal** International Mathematics & Science Olympiad (IMO, ISO)

## LANGUAGES

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- **English**, C2
- **Telugu**, C2
- **Hindi**, A1
- **Spanish**, A1