

# BALA PAVANI KOPPURAVURI

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## EDUCATION

**Master of Science**, Georgia State University August 2025 - Present  
Computer Science **GPA 4.2/4.3**

**Bachelor of Technology**, SRM University AP August 2021 - May 2025  
Computer Science and Engineering **CGPA 9.04/10**

## WORK EXPERIENCE

**Georgia State University - MORSE Lab** (Volunteer) January 2026 - Present

- Involved in the collection of EEG and heartbeat rate datasets for brainwave analysis and neurological signal processing.
- Attend weekly MORSE Lab meetings, actively participating in research discussions by sharing ideas and feedback with researchers.

**Georgia State University** (Graduate Teaching Assistant) August 2025 - Present

- Mentoring 150+ students in Data Structures using Python course and Principles of Computer Science course.
- Assisting in development of course material, grading and related research.

**Coincent** (Data Science Internship) October 2023-December 2023

- Developed Surprise Housing Case Study by data preprocessing and building ML model using GridSearchCV and Ridge Regression, which is used to model the price of houses with available independent variables.
- Data cleaning, Exploratory data analysis, Data preparation is done on imported dataset

**SRM University AP** (Summer Research Internship) June 2023-August 2023

- Research on how machine learning is used in Person Authentication and EEG datasets by implementing SVM, KNN.

## PUBLICATIONS

**Journal (Published - Scientific Reports)** August 2025

Ch Madhu Bhushan, **Priya Koppuravuri**, Nomitha Prasanthi et al. Deploying TinyML for Energy-Efficient Object Detection and Communication in Low-Power EdgeAI Systems. ([Journal Link](#))

**Conference (Accepted - IEEE CINE)** January 2026

Ch Madhu Bhushan, **Priya Koppuravuri**, Nomitha Prasanthi B, Firoz Gazi, Md. Muzakkir Hussain " Multi-Controller TinyML Architecture for Object Detection with Efficient Communication and Applications"

**Patent (Published - Intellectual Property India)** September 2025

**Koppuravuri Bala Pavani Lakshmi Priya**, Chakka Madhu Bhushan, Nomitha Prasanthi Bisiringi, Fazal Shaik, Siripalli Hemanth Durga Kumar, Firoz Gazi, Md. Muzakkir Hussain "Multi-Controller TinyML Architecture for Object Detection with Efficient Communication and Applications" - Patent Application Number: **202541087210**.

**Patent (Published - Intellectual Property India)** August 2025

Chakka Madhu Bhushan, **Koppuravuri Bala Pavani Lakshmi Priya**, Surayya Aruvanpuzha, Firoz Gazi, Md. Muzakkir Hussain, Dinesh Reddy Vemula "System and Method for Air Quality Monitoring and Alert Generation using Artificial Intelligence" - Patent Application Number: **202541000511**.

**Patent (Published - Intellectual Property India)** October 2024

Fazal Shaik, Meka Naga Nandini Devi, Surayya Aruvanpuzha, Chakka Madhu Bhushan, **Koppuravuri Bala Pavani Lakshmi Priya**, Firoz Gazi, Mohammad Abdussami, Md. Muzakkir Hussain "ATTENDEdge: An Edge-AI-based Smart Attendance System using 3D Object Detection" - Patent Application Number:**202441077282**.

**Book chapter (Published)** October 2025

Farha Fatma, **Priya Koppuravuri**, Pratyusha Ghanne, Firoz Gazi, Md.Muzakkir Hussain "Development of a Deep Learning model for OCT image classification for Central Serous Chorioretinopathy", In Transformtive Technologies in Healthcare: A Deep Dive into AI and Machine learning, Cambridge Scholars Publishing. ([Book Chapter Link](#))

## PROJECTS

**Brain Tumor segmentation using GVF Snakes — Active Contour models, Dice Coefficient** January 2026 - Present

- Currently implementing a parametric active contour model using energy minimization for medical image segmentation.
- Extending the model with Gradient Vector Flow (GVF) to address instability in traditional snake algorithms.

**Property Pulse — FCM, Flutter, Firebase, Cloudinary** ([GitHub Link](#))

November 2025 - December 2025

- Designed an interactive real estate exploration app enabling personalized property discovery, shortlisting, geolocation-based search, and direct buyer - seller engagement.
- Implemented Firebase Authentication, Firestore-backed listings, Cloudinary image management, and real-time push notifications using FCM for instant seller alerts and user interactions.

**Campus Swap & Freecycle — Flutter, Firebase, Cloudinary** ([GitHub Link](#))

September 2025 - October 2025

- Developed a campus marketplace app enabling item swapping, selling, and freecycling with token-based transactions, geolocation listings, wishlist, and reviews.
- Implemented secure Firebase authentication, Firestore database management, and Cloudinary image uploads with a clean, user-friendly Flutter UI.

**Lung Cancer Detection using CNN** ([GitHub Link](#))

November 2024 - December 2024

- Built a deep learning model to classify lung cancer into Adenocarcinoma, Benign and Squamous Cell Carcinoma to provide an intuitive interface for easy use by healthcare professionals.
- Analysis is done by using ResNet50 model and of all train test splits using classification metrics accuracy is improved.

**Chatbot for mental health support** ([GitHub Link](#))

January 2024 - May 2024

- Developed using MERN stack aims to provide mental health support through an AI chatbot.
- Functionalities include user registration, login, using chatbot, session booking and access to previous booked sessions.

**SKILLS & CERTIFICATIONS****Programming Languages**

Python, Java, Data Structures and Algorithms, HTML, CSS, JavaScript, TypeScript.

**Databases & Data Tools**

MySQL, MongoDB, Data Analysis, Tableau, RAG, Relational databases.

**ML & AI**

TinyML, IoT, TensorFlowLite, PyTorch, Scikit, DL, CV, LSTM, VGG, NLP, LLMs.

**Web & App Development**

Flutter, Dart, REST APIs, Flask, Firebase (Authentication, Firestore), Cloudinary, FCM.

**Certifications**

Coursera - Deep Learning, NPTEL - Electronic Systems for Cancer Diagnosis, Design &amp; Implementation of Human-Computer Interfaces, Data Base Management System, Soft Skills.