

RAJESH PEDASINGU, M.Tech.

✉ ee21m019@iittp.ac.in

in LinkedIn

GitHub

☎ 8801187791



Employment History

2023 –

📌 **Deputy Manager**, at Mahindra Last Mile Mobility in Embedded systems .

Responsibilities:

- **Embedded Software Development:** Develop product test software aligned with hardware changes in the 3-wheeler BMS Board. Proficient in I2C and SPI configuration for Battery management system, Debug the code and fix the field issues in Vehicles.
- **Functional Testing :** Test BMS and VCU functionalities based on system requirements using manual test bench setup and VT system.
- **Test Case Creation:** Write test cases for BMS and VCU functionalities in accordance with system requirements.

skills: dSPACE SCALEXIO HIL , dSPACE AutomationDesk , Vector CANalyzer , vector CANoe ,Vehicle Spy, MPLab IDE , MPLab IPE , BMS & VCU manual Testing , 3 wheeler BMS product Test software ,I2C and SPI configuration, External Flash Memory.

2022 – 2023

📌 **Deep Learning Applications in Computer Vision & Image Processing:** MTech at [University/Institution].

Key Achievements:

- Acquired proficiency in **image processing** and computer vision fundamentals.
- Implemented real-time **image** and **video classification** using Nvidia Jetson Nano, leveraging pre-trained networks such as GoogleNet, VGG-16, and ResNet-18.
- Developed advanced segmentation techniques including UNet, attention-guided UNet, and Mask R-CNN for precise **Image Segmentation** tasks.
- Applied **Generative Adversarial Networks (GANs)** like pix2pix GAN and GANs with UNet for generating intensity-transformed sinograms, aiding in tumor detection in CT scans.
- Implemented Faster R-CNN for automated mediastinal lesion detection in CT scans, advancing medical diagnostics through enhanced **object detection** .

skills: Proficient in Python, TensorFlow, Keras, Pandas, NumPy, MATLAB, OpenCV, and Jupyter Notebook.

Education

Program	Institute	Year	%/CGPA
MTech(SPCOM)	IIT Tirupati	2023	8.83
BTech(ECE)	R.V.R & J.C College of Engineering	2016	9.02
Intermediate	Sri Chaitanya Junior Kalasala, Ongole	2012	94.9%
SSC	Sri Aditya Public School, Ongole	2010	89.17%

Skills

Programming	■ C, C++, Python.
Libraries	■ TensorFlow , Keras ,Numpy, Pandas, Matplotlib, OpenCV.
Software/Tools	■ MatLab, Jupyter Notebook, MPLab IDE , MPLab IPE.
Areas of Interest	■ Digital Electronics, Signal Processing, Image Processing, Computer Vision, Deep Learning, Digital and Analog Communication .
Languages	■ Proficient in English,Telugu .

Projects

- 1 Year ■ **Sinogram Synthesis Using Deep Learning Methods**
Guide: Dr. Subramanyam Gorthi : Implemented deep learning techniques (GANs, UNet, attention-guided UNet) to synthesize intensity-transformed sinograms from raw data. Investigated tumor detection in sinograms compared to CT scans.
- 3 Months ■ **MICCAI 2022 MELA (Mediastinal Lesion Analysis) Challenge**
Guide: Dr. Subramanyam Gorthi : Developed a model for automatic detection of mediastinal lesions from CT scans using the faster R-CNN algorithm.
- **Image Matting By Bayesian Approach**
Guide: Dr. Subramanyam Gorthi : Implemented a Bayesian framework for solving the matting problem, extracting a foreground element from a background image.
- **Image Classification Using Jetson Nano Board**
Guide: Dr. Rama Krishna Sai Gorthi : Classified images and videos using pre-trained networks (GoogleNet, VGG-16, ResNet-18) on the Nvidia Jetson Nano 2GB developer kit.
- **Musical Source Separation**
Guide: Dr. Rama Krishna Sai Gorthi : Objective: Separate harmonic and percussive sources from mixed musical signals.
- 6 Months ■ **Radio Frequency Controlled Industrial Applications**
Guide: Dr. M. Suresh : Developed a microcontroller-based integrated remote-controlled switch using radio frequency for home and industrial applications.
- **Campus Radio**
Guide: Dr. T. Rangababu : Implemented an F.M transmitter to communicate messages and notices in the college to students.

Miscellaneous Experience

Positions of Responsibility




- 2022-2023 ■ **Assistant warden for mess and cafeteria**, Formerly served as the Assistant Warden for mess and cafeteria at the Indian Institute of Technology, Tirupati.
- 2021-2022 ■ **Event Coordinator, Tirustava-2022**, Lead a team of 6 to conduct squid games event during annual Cultural-Techno fest.

Miscellaneous Experience (continued)

Certification

- 2023  **dSPACE SCALEXIO HIL Training.** Awarded by dSPACE.
-  **dSPACE AutomationDesk Training.** Awarded by dSPACE.

Extra Curricular activities

-  **Kridan-2023 :** Runner-up in Basketball Tournament at IIT Tirupati.
-  **Tirustava-2022 :** Coordinate Member of marketing committee for annual techno-cultural fest of IIT Tirupati.
-  **Tirustava-2022:** Core Member of Logistics and security committee for annual techno-cultural fest of IIT Tirupati.

Relevant Courses

- | | |
|--------------------|-------------------------------------|
| • Machine Learning | • Deep Learning for computer vision |
| • Medical Imaging | • Artificial Intelligence |
| • Python | • Analog and Digital Communication |