

VEERA RAJASEKHAR REDDY GOPU

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Education

University of Florida

Aug. 2022 - May 2024

Master of Science in Computer Science GPA: 4.00/4.00

Gainesville, FL

- **Courses:** Math for Intelligent Systems, Analysis of Algorithms, Machine Learning, Advance Data Structures, Human-Computer Interaction, Distributed Operating systems

Indian Institute of Technology Tirupati

Jul. 2016 - Jun 2020

Bachelor of Technology in Electrical Engineering GPA: 9.04/10

Tirupati, India

- **Courses:** Deep Learning, Computer Vision, Medical Imaging, Data Structures and Algorithms

Experience

Student Research Assistant | *Python, Pytorch, TensorFlow, OpenCV, Data processing*

July 2023 - Present

- Working on segmenting roots from soil using transfer learning from a state-of-the-art model trained on Peanut root dataset.
- Training a 2D Unet model with 6934 images, using cross-entropy loss and ROC-AUC, IOU and Dice Loss as accuracy metrics.

Student Assistant-mirthAI Lab | *Python, Pytorch, Monai, Multi-GPU, TensorFlow*

Oct 2022 - July 2023

- Contributed to a Multi-class Aorta Segmentation project involving 69 patient datasets, manually segmenting 45 CT scans using 3D-Slicer, dedicating an average of 2-3 hours per scan to ensure accurate results
- Trained the models: UNet achieved a Dice score of 0.69, TransUNet achieved 0.71, and SwinUNet achieved 0.73.
- Participated in Nvidia Hackathon and developed the code to use Multi-GPU and improved the training speed by 10X and Images/sec by 10X.

Siemens EDA

Jul 2020 - Jun 2022

Senior Member Technical Staff | Image Processing, C++, Python, OpenCV, Jira, Shell Scripts, CVS, Git Bangalore, India

- Designed and developed a verification tool in C++ that automatically grades the image contours and cuts down the customer review process by 80%.
- Produced test results on 26 separate test cases that the customer provided with 100% contour labeling accuracy.
- Coordinated in development of Faster Contour Extraction tool in Python achieving 100% accuracy for high-quality images.
- Skilled in gdb and Valgrind for debugging, Git and CVS for code management, and CalibreWB for project-specific tasks. Managed tasks with Jira and streamlined documentation using Confluence.

TCS Innovation Labs

May 2019 - Jul 2019

Research Intern | Python, Time Series Analysis, Tensor flow, Keras

Hyderabad, India

- Proposed a project on Load Disaggregation, involving the introduction of new variants of RNNs such as LSTM and GRU models trained using aggregate power data.
- Published a conference paper with Load Identification accuracy is almost 100% and pattern reconstruction accuracy is about 80%.

Projects

EventBuzz | *React, Node.js, Git, Django, MongoDB*

Feb 2023 - April 2023

- Oversaw the entire development of an event-centric website using Node.js for the backend, coupled with MongoDB, and created a visually engaging and user-friendly frontend with React and CSS.
- The site's rich features and streamlined event processes can help a 30% increase in student engagement with university activities.

Face Recognition and Attention Analysis | *Python, Tensor flow, Keras*

Jan 2020 - May 2020

- To perform face recognition and generate fatigue score of each student from the videos captured in the lecture halls.
- Calculated EAR and MAR with 93.7% accuracy using MTCNN and DLIB networks to localize eyes.
- Developed a prototype and performed an accuracy of 93.7% analysis on YouTube videos and live classroom videos.

Skills

Programming: Python, R, C++, Java, JavaScript, SQL, HTML, CSS, React, Shell Scripting, CUDA

Databases: SQL, SQLite, MongoDB

Frameworks: React, Django, Flask, Azure, AWS, WordPress, HPC Hipergator

Libraries: Monai, SimpleITK, OpenCV, Scikit-learn, Keras, Tensor Flow, Pytorch, Pandas

Tools & Services: Git, Visual Studio, Pycharm, Eclipse