Sarath Kumar Mannam

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Experience

- **Graduate Research Assistant, GeoLocalization Project** — Center for Research in Computer Vision, UCF
  Supervisior: Dr Mubarak Shah — *Sep 2021 - Present*
  - Built a large Dataset of 2.6 M Ground, Aerial Image Pairs using OpenCV, Python, GCP, BDD100k Dataset.
  - Used Attention and Transformer models for effecient retrival of image pairs improving top-1 accuracy by 2%
- **Deep Learning Summer Intern, Real-Time Anomaly Detection** — Remote, Bennet University
  Supervisor: Balamukund Mishra — *June 2020 - July 2020*
  - Created custom Dataset and used UCF101 Dataset to detect Anomaly Actions from Drone Videos in real-time
  - Used 3D-CNN and it's variants to deliver 94.2 % classification accuracy on the validation set

Projects (Available on GitHub)

- **Medical Imaging - Pneumonia Chest X-ray Detection (ResNet, Transfer Learning):**: Research oriented, open source and deployed API on AWS Cloud to classify upload chest x ray image as Normal or Pneumonia affected with **92%** Accurate Classification. Tech: PyTorch, Python, Flask, Docker, AWS (February '22)
- **DARPA - Seismeic Waveform Reconstruction (Transformers, Python)**: Research Oriented, Open source project to fill the missing gaps(1s) in the seismic waveforms(30s) using Deep Learning, Project from US Military. Contributed to producing **SOTA results** using Swin Transformers (March'22)
- **Object Detection - Chess Pieces(Computer Vision, Detectron2)**: Performed Custom Object Detection with a minimum of **80.0 MAP** on all classes using Detectron2 Model Tech: Python, Faster R-CNN, & FPN's(December'21)
- **Machine Learning - Microsoft Malware Classification Challenge**: Multi-Class Malware Classification using SOTA Bagging and Boosting ML Models with **98%** accuracy and loss upto **0.01** Tech: NLP, Python, Scikit-learn (December '21)
- **Machine Learning - MovieLens Recommendation System**: Develop item based and content based movie recommendation models on MovieLens100k with dataset with best MAE of **0.90** Tech: Python, SurpriseLib(November'21)
- **Campus App, RVRJCCE (Android Studio, Firebase, Mobile App)**: Developed Mobile Application for **2000 students** in the campus to deliver news, updates,& ways to connect students across campus Tech: Postman, JAVA (May '19)
- **Ongoing Projects - Image Captioning using Transformers, Perception model development in self-driving cars at Autonomous Driving Club at UCF**:

Education

- **University of Central Florida** — Florida, USA
  *Masters - **Computer Vision**; GPA: 4.00* — *August 2021 - Expected May 2023*
  ***Courses:** Advanced Computer Vision, Computer Vision, 3D Computer Vision,Machine Learning, Medical Image Computing, NLP*
  ***GRE:** 324/340 Verbal: 155/170, **IELTS** : 8.0/ 9.0 R: 8.5, L: 8.5 S: 7.5 W:7.5*
- **RVR & JC College Of Engineering** — Andhra Pradesh, India
  Bachelor of Technology - Computer Science; GPA: 3.77 — *July 2017 - May 2021*
  ***Courses:** Digital Image Processing, Machine Learning, Data Engineering, Data Analysis in R, Hypothesis Testing, Data Structures*

Skills Summary

- **Languages**: Python, C++, JAVA, C, R Programming, UNIX, JavaScript, SQL, Bash, JAVA, PHP
- **Frameworks**: PyTorch, Scikit-learn, OpenCV, TensorFlow, MediaPipe, Flask, NodeJS,
- **Tools**: Docker, GIT, MySQL, SQLite
- **Platforms**: AWS, Elastic, GCP, Firebase, Linux, Raspberry, Web, Windows

Honors and Awards

- Awarded the Best student project for Mobile App Development - June, 2019
- Second Round Contestant at TCS Digital Coding Contest - September, 2019

Volunteer Experience

- **Club Lead for Technical Talks at RVRJCCE** — Gunt
  Organized events, conducted workshops and delivered technical talks impacting over 500 students in the Department Jan 2019 - Decem
- **Event Organizer at National Service Scheme** — Guntur, India
  In charge of Community service directing 600 Students impacting village areas and government schools Jan 2019 - April 2019