

Sanjay Shanbhag

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EDUCATION

Master of Science in Computer Science

University of Central Florida | Orlando, FL | 3.92 GPA

August 2021 - Present

Bachelor's in Electronics and Communication Engineering

Acharya Institute of Technology | Bangalore, India | 8.01 GPA

July 2015 - July 2019

TECHNICAL SKILLS

Programming: C, C++, Python

Frameworks and Technologies: Artificial Neural Networks, Computer Vision, Deep learning, Azure Cognito services, Image Processing, Machine learning, Keras, TensorFlow, OpenCV, ONNX, CNN, Linux, Pytorch, Git (Version Control), postman, Open vino, Scikit-Learn, Pandas, Embedded Systems (Raspberry pi, Arduino, ESP32, IP and Analog cams), ROS (Robot Operating system)

PROFESSIONAL EXPERIENCE

Data Science Engineer

AindraLabs Pvt Ltd | Bangalore, India

August 2020 - July 2021

- Learned new skills and applied them to daily tasks, improving efficiency and productivity and carried out day day-day duties accurately and efficiently
- Communicated with ## clients to provide weekly updates on the progress of relevant projects
- Improved the **FPS to 25** for a computer vision application by utilizing quantization on deep learning models.
- Worked on "REVERSE VENDING MACHINE" for bottled beverages which included training an **Intra-class classifier** on Nvidia-GPU for bottles with 150 classes.
- Designed a 360-degree Barcode scanning system with unique barcode detection system.
- Increased the overall accuracy of "WOODLOG FACE RECOGNITION", by a margin of **5%** using "**Soft Attention Mechanism**" using VGG Attention and Res Attention models.
- Found out a method to visualize the learnings of CNN using **GRAD-CAM** (Applicable to Explainable-AI)
- PEOPLE ANALYTICS, which is basically in-store analytics (Hero Moto Corp, Tanishq) which involves getting insights of the store like consumer and staff count (**person-REID model OSNet using Pytorch**), group count, age, and gender etc.
- Creating Qualitative and Quantitative reports for trained Computer vision models.

Embedded Software Engineer

Sigsenz Technologies Pvt Ltd | Bangalore, India

September 2019 - August 2020

- Prepared detailed reports on updates to project specifications, progress, identified conflicts and team activities
- Managed technological issues for assigned projects, increasing customer satisfaction with on field service.
- Worked on "FACE RECOGNITION APP" for the driver face recognition using **FACENET (Keras)** with various features like Face absence detection, 2 level Facial verification using azure cognitive services, OTA update feature etc.
- Single-handedly trained a MULTI CLASS OBJECT DETECTOR (seatbelt, mobile-usage, drowsiness, facial mask detection) for the driver Analytics.
- Worked on Azure Cognito Services for image data engineering and annotation.
- INDUSTRIAL SURVEILLANCE using FACE RECOGNITION algorithm for a food industry with a periodic telegram alert system.
- OFFICE SURVEILLANCE using multi overhead camera setup utilizing **Ultra-Light 1 MB (Tensorflow)** model for smoother FPS.
- People Counter for driver cabin using **Mobilenet-V2 (Keras)** architecture with OpenCV framework.
- Got an opportunity to work on edge-deep learning projects and its shortcomings.

INTERNSHIP AND PROJECT EXPERIENCE

Old Dominion University Internship program | Acharya Institute of Technology

2018

Driver Drowsiness Detection | Acharya Institute of Technology

2019

Electronic testing and Development Pvt. Ltd | Bangalore, India

2019

Neural Networks and Deep Learning | Coursera

2020

Improving Deep Neural Networks Coursera	2020
Structuring Machine Learning projects Coursera	2020
Introduction to Containers w/ Docker, Kubernetes, OpenShift Coursera	2020
Ebay 2021 University Machine Learning Competition eBay ML competition	2021
Working on Video Segmentation for autonomous driving University of Central Florida	2021
Working on Autonomous driving project (RTIS research lab)	2021
Build Basic Generic Adversarial networks (GANs) Coursera	2021
Working on Synthetic Data Generation using CTGAN's University of Central Florida	2021
Working on Tiny-Action Recognition Challenge CVPR 2022	2021

ON-CAMPUS ACTIVITIES

Active Member of Member of IEEE UCF University of Central Florida	2021
Student worker at UCF Dining services University of Central Florida	2021
Organizing Member of UCFKAT (Knights Auto Team) Autonomous Driving Community	2022
Graduate Teaching Assistant Introduction to Robotics	2022