
SUMMARY

Experienced Data Scientist with 3 years in developing analytical solutions for multimodal data, demonstrating a passion for continuous learning, and staying at the forefront of AI and Data Science trends. Actively seeking a role as a Data Scientist/Data Analyst at the core of the field, bolstered by participation in GHC.

EDUCATION

Master of Science in Computer Science **Graduated in May 2023**
University of Central Florida, Orlando, FL GPA: 3.8/4.0

Relevant Coursework: Data Visualization, Data Mining, Machine Learning, Computer Vision, Independent Study on Robotic Simulation on AWS

Bachelor of Engineering in Electronics and Communication **July 2015 - July 2019**
Visveswaraya Technological University, Karnataka, India GPA: 8.1/10.0

Relevant Coursework: Data Structures & Algorithms, Embedded Systems, Image Processing, Communication Networks, Information theory & coding

SKILLS

Programming Languages : Python, R, C++, MATLAB, Shell Scripting, MSSQL, MongoDB

Tools and Technologies : Visual Studio code, Tableau, Power BI, Splunk, postman, Git, Azure Cognitive services, Deep Learning, Data Science, ROS, Jupyter Notebook, Anaconda, Linux, AWS Robomaker, Google Collab, Google Cloud, Google DialogFlow

Libraries : Pytorch, Keras, TensorFlow, Scikit-learn, Pandas, OpenCV, ONNX, Matplotlib, Seaborn, PyInstaller, Open3d, SciPy

PROFESSIONAL EXPERIENCE

AI Developer/Specialist – DeukSpine Institute **08/2023 – Current**

- Training and creating the knowledge base for an interactive chatbot using Google DialogFlow and Cloud API's, exploring migration aspects of dialogflow with chat giants like ChatGPT, PaLM etc.
- Successfully engineered a data pipeline to streamline comments from YouTube channel assisting in the development of knowledge base.

Graduate Teaching Assistant – University of Central Florida **01/2022 –05/2023**

- Established a lab infrastructure for conducting robotic experiments with ROS and Ubuntu. Delivered presentations on robotic simulation, aiding a class of 60 students in their assignments. Gave a guest lecture showcasing the Unitree Quadruped robot's functionality and advanced features.
- Utilized AWS cloud infrastructure to create online lab environments using Robomaker and meticulously documented the entire workflow.

Graduate Research Assistant: Decision Support and Informatics Lab – University of Central Florida **05/2022 09/2022**

- Developed two innovative algorithms: the first one employs torchio to simulate motion artifacts in MRI and then quantifies their magnitude using a series of radon transforms. The second algorithm assesses MRI under-sampling by leveraging a combination of Hough transform and Canny algorithm, demonstrating excellent performance on images with under-sampling above level 4.

Graduate Research Assistant: Real Time and Intelligent Systems Lab – University of Central Florida **05/2022 – 09/2022**

- Spearheaded industrial automation efforts, achieving a proficient near pick & drop mechanism of stab bars utilizing industrial-grade Franka robots and depth cameras. Accomplished within a short timeframe of 3 months.
- Created an advanced algorithm for spline estimation of stab bars, employing the idea of principle components on captured point clouds. Additionally, developed a separate method for detecting hook points on the stab bars using a voxel-based connected component algorithm.

Data Scientist – Aindra Labs Pvt. Ltd. **08/2020 - 06/2021**

- Designed a multi-sensor reverse vending machine software which background subtraction for bottle detection, 360 deg unique barcode. Scanner. Trained an Intra-class VGG classifier with an overall accuracy of 75% on the 150-class bottle recognition task.
- Enhanced the accuracy of the wood log face recognizer by margin of 5 using soft attention mechanism, furthermore, gave a detailed report of recognition failure employing XAI method of GRAD-CAM.
- Optimized the deep learning-based people detector by a margin of 5 FPS by introducing FP 16 quantization on the trained model, automated the training of OS-Net customer vs staff recognition utilizing active learning and cut down the cost of data engineering by 66%.

Software Development Engineer - Sigsenz Technologies Pvt Ltd. **09/2019 - 08/2020**

- Developed a Driver Authentication System with a 10-snap facial registration pipeline using REST API, Azure Cognitive Services, and the Face Net Feature extractor, tweaked it with an intelligent face absence detector using a quantized Face detector.
- Created a PyQt5 Application with built-in OTA update feature cutting cost by 30%, included a Power BI dashboard for real time Driver analytics.
- Designed a factory surveillance system on Jetson Nano, affixed it with operator absence alert mechanism using a server client model in PHP.

PROJECTS

Lynx Transit Route Analysis, Academic Project **04/2023**

- Presented a detailed analysis on the Lynx GTFS dataset using ggplot and Google Maps API, curated stops near UCF using Vincent ellipsoid for a better attention catch, highlighted the average delay of 15-25 mins across the bus services along a specific route.

BRFSS Health Data Analytics: Diabetes Prediction, Academic Project **12/2022**

- Conducted diabetic prediction on an imbalanced survey dataset of 400,000 records, achieving a F1 score of 73.88% using Random Forest regressor. The model displayed a favorable balance between precision and recall on the test set, employing a combination of univariate and multivariate data imputation techniques.
- Enhanced predictor performance by 23% by implementing the Histogram Gradient Boosted Regressor as a single-stage imputer, resulting in improved accuracy and predictive power.

Panoramic Image Stitcher, Academic Project **11/2022**

- Created a user-friendly Panoramic Image Stitcher app with MATLAB, using SIFT for feature extraction (16 key points per image) and RANSAC (300 iterations) for precise image alignment, producing stunning panoramas while also maintaining the aspect ratio of the output.

Image Segmentation for Autonomous Vehicles, Academic Project **11/2021**

- Trained U-net model on the cityscape's dataset using cross entropy loss and Adam optimizer with a learning rate of 0.0001, batch size of 16 and a total of 22 epochs only to obtain a whooping IOU of 45.36% on the test set.

PUBLICATIONS AND CONFERENCES

- **Data Incompleteness in MRI – University of Central Florida**, Orlando, Florida Ongoing
- **Robotic Competition Organizer - IEEE Southeast Conference**, Mobile, Alabama 04/2023
- **Code Judge – IEEE South East Conference**, Orlando, Florida 04/2022

CERTIFICATIONS

Accelerated Computing with CUDA Python; NVIDIA | AWS Certified Cloud Practitioner; AWS | Introduction to Container's w/ Docker, Kubernetes & OpenShift; IBM, Coursera

CO-CURRICULARS

- **Student Member**, IEEE Student Chapter – Orlando, Florida 2021-Current
- **Organizing Member**, Knights Auto Team – University of Central Florida 2022
- **eBay's University Machine Learning Competition** – University of Central Florida 2021