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Bharathrushab Manthripragada

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EDUCATION

MSE, Electrical and Systems Engineering, University of Pennsylvania, GPA: 4.0/4.0 **Aug 2021 — Jul 2023**
Courses : Statistics for Data Science; Applied Machine Learning; Linear, Non Linear, Integer Optimization, Big Data Analytics, Deep Learning for Data Science, Learning in Robotics.

B.Tech, Electrical and Electronics Engineering, National Institute of Technology, Calicut, GPA: 8.3/10.0 **Jul 2016 — Jul 2020**
Relevant Courses : AI-Theory and Practice; Data Structures; ANN and Fuzzy Logic; C Programming

SKILLS

Programming C, Python, SQL Server, Spark, MySQL, MATLAB, HTML/CSS, Java, \LaTeX
Tools Numpy, Pandas, OpenCV, Keras, NLTK, PyTorch, Tensorflow, Scikit-Learn, Git, Selenium, Scrapy, AWS, Microsoft Azure, Snowflake, Hadoop, ApacheSpark

INDUSTRY EXPERIENCE

Senior Analyst/Software Engineer **Nov 2020 — Aug 2021**
Capgemini Bangalore, India

- Worked in the Cloud Data Platform for WB products project by providing cloud based solutions on Snowflake using SQL, Python, AWS S3 etc and created a code pipeline to run python scripts for uploading data from S3 to Snowflake, changing excel file to word etc.
- Trained on AWS, Azure (AZ-900 Certified) along with Unix, Python, Java, SQL for data querying, manipulation and loading.

RESEARCH/OTHER EXPERIENCE

Graduate Research Assistant **Jan 2022 — Present**
University of Pennsylvania Philadelphia, USA

- 3D vision based object detection for a fully autonomous UAV using semantic SLAM for precision agriculture under Prof. Vijay Kumar and Xu Liu at GRASP Lab.

Graduate Teaching Assistant **Jan 2022 — Present**
University of Pennsylvania Philadelphia, USA

- TA for the course CIS519 - Applied Machine Learning. Responsible for setting homeworks, project mentoring, grading etc.

VPSE Graduate Assistant **Jan 2022 — Present**
University of Pennsylvania Philadelphia, USA

- Teaching ML, programming, Math for first-generation high school students to get into competitive Post-Secondary Institutions.

Graduate Research Assistant **Sep 2021 — Jan 2022**
The Wharton School Philadelphia, USA

- Worked under Hari Ravi, Prof. Chris Geczy on stock market correlation with news articles using sentiment analysis and Big 5 personality traits prediction based on a person's speech and video for Portfolio Optimization

Research Intern **May 2019 — Jul 2019**
International Institute for Information Technology, Bangalore Bangalore, India

- "Seizure detection and classification using Machine learning on EEG signals" and "Applying machine learning algorithms to EMG signals for classification of fingers" under the guidance of Prof. Dr. Madhav Rao

PROJECTS

Masked Face Recognition with FaceNet Keras, LPBH, CNN models, UPenn **Oct 2021 — Dec 2021**

- Detecting faces of people with masks properly or improperly worn along with the person's identity(name) using Keras, OpenCV, CNN.

Design of tactile audio system for visually impaired, NITC **Aug 2019 — Jun 2020**

- Major Project - A prototype for making higher studies easy for visually impaired students and also cost effective using Arduino Mega, RFID, Capacitive Touch Sensors.

Analysis of ECG using Machine Learning Algorithms, NITC **Jan 2019 — Jun 2019**

- Mini Project - A real time ECG data acquisition system was built using Notch Filters with an ML algorithm to classify the real time processed ECG signals as arrhythmia or non-arrhythmia.

Hand Gestured Emoticons recognition, NITC **Aug 2019 — Dec 2019**

- Done using Computer Vision techniques as part of course project of Artificial Intelligence: Theory and Practice that recognises hand gestures and gives respective emoticon based on the shape of the gesture.