NASHIR JANMOHAMED

(310) 490-3310 | nashirbass@gmail.com | www.nashirj.com

EDUCATION

University of Central Florida, Computer Science (GPA: 3.94)   *Fall 2021 - May 2023*
UCLA (Bachelor of Music), Ethnomusicology-Jazz Studies (GPA: 3.47)   *July 2013 - June 2017*

SKILLS AND TECHNOLOGIES

Python, C/C++, Java, MATLAB, Simulink, bash, Rust, NumPy, scikit-learn, Keras, PyTorch, OpenCV, Pandas, Git, GitHub, Arduino, Raspberry Pi, ROS, Unix/Linux, ROS, Jupyter

WORK EXPERIENCE

Google (Maps), Software Engineer   *May 2022 - August 2022*

- Designed and implemented C++ service to serve canonical Geo data for UGC edit use cases
- Led cross-team effort with SREs and Geo Developer to improve reliability (org level OKR)

Google (Maps), Software Engineering Intern   *May 2022 - August 2022*

- Implemented C++ microservice to replace the existing service used across the company for online reads to Google's canonical store of Geo data, improving code health and test coverage
- Created test plans 1) to validate new read path and 2) for automatic release gating/qualification
- Configured load shedding and migrated Golang client to new service

Google (Core), Software Engineering Intern   *May 2021 - August 2021*

- Built Tensorflow model sharding utility using C++, allows checking large models into version control system; also built utility to compare two TF models to validate sharded vs. original model
- Wrote framework code to incorporate model into data pipeline, generating video understanding signals to empower search/ranking products + implemented video feature ingestion microservice

NASA KSC, Machine Learning, Modeling and Control Intern   *June 2020 - May 2021*

- Built supervised learning architecture using Python to train a Keras model to predict state evolution of a dynamical system over time with greater than 99% accuracy
- Wrote research proposal for lunar simulation w/ accurate modeling of soil deformation that was approved for funding ($\sim$\$100K); enables developing autonomous lunar excavation capability
- Implemented control policies in Simulink & Arduino to control flexible inverted pendulum robot
- Created inference model enabling excavation robot to estimate quantity of regolith mass ingested, wrote and deployed ROS node to hardware; $< 10\%$ MSE operating in simulated lunar environment

NASA GSFC, Software Engineer Intern (5 hrs/week)   *July 2020 - May 2021*

- Built Python pipeline to process >780M points of LiDAR data; ML w/ dataset enables onboard autonomy in new satellite, increasing efficiency & reducing power/storage/comms requirements

NASA KSC, Robotics and Computer Vision Intern   *June 2019 - August 2019*

- Developed methods to track simulated agents using OpenCV and predict trajectory in real-time with $\sim$80% accuracy, used for intelligent GNC that avoids collisions in dynamic environments

SELECTED PERSONAL PROJECT

Camera Locking and Modular Positioning System (CLaMP)   *August 2018 - July 2019*

- Designed a camera attachment mechanism for NASA spacewalks on ISS; design was selected as one of 24 to be tested at Johnson Space Center; more detail at www.nashirj.com/quintessence