NASHIR JANMOHAMED

www.github.com/nashirj | https://linkedin.com/in/nashir-janmohamed | www.nashirj.com
Los Angeles, CA 90034 | (310) 490-3310 | nashirbass@gmail.com

EDUCATION

Santa Monica College *September 2017 - Present*
Computer Science and Engineering GPA: 3.78
University of California, Los Angeles *July 2013 - June 2017*
Bachelor of Music, Ethnomusicology-Jazz Studies GPA: 3.47

SKILLS AND TECHNOLOGIES

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

WORK EXPERIENCE

NASA - Machine Learning Intern *June 2020 - August 2020*

- Modify OpenAI gym 'Cartpole-v0' environment to have nonlinear dynamics, enabling data collection for supervised learning of system dynamics.
- Used scikit-learn to learn linearized state evolution matrix of system. Used PyTorch and Keras to build neural network models to learn nonlinearities of state evolution.

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

- Developed system using OpenCV to track simulated agents and predict their trajectory in real-time, enabling autonomous GNC that avoids collisions in dynamic environments.
- Wrote grant application to internal NASA KSC funding stream for heterogeneous decentralized multi-robotic system for In-Situ Resource Utilization.

NASA - Control System Software Development Intern *January 2019 - May 2019*

- Changed implementation of test framework event processing utility, eliminating over thirty intermittently failing unit tests, decreasing time required to compile codebase and run tests.
- Wrote script to parse JSON API data from user-specified streams on Jenkins automation server and create CSV file to provide a convenient way for developers to see history of failing tests.

PERSONAL PROJECTS

Camera Locking and Modular Positioning System (CLaMP)

- Designed a camera attachment mechanism for NASA design competition. Design was selected as one of 24 to be tested at Johnson Space Center. More detail at `www.nashirj.com/quintessence`.

SD Hacks 2019 hackathon; won "Best IoT that Incorporates Multiple Nodes"

- Developed risk estimation algorithm to predict likelihood of fire given aggregated sensor data from long-range, low-powered, wifi-enabled mesh network of microprocessors.

Discrete Math algorithms package (DMalgos)

- Created open source python library to compute various discrete math results with interactive GUI.

VOLUNTEER/EXTRACURRICULAR EXPERIENCE

FIRST Robotics Competition - Mentor (Pink Team #233) *Spring 2019*

SMC Robotics Club - Operations Manager *August 2019 - June 2020*