Nashir Janmohamed

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EDUCATION

SANTA MONICA COLLEGE   Santa Monica, CA
  Computer Science and Engineering   GPA: 3.79   September 2017 – Present
UCLA, COLLEGE OF MUSIC   Los Angeles, CA
  Bachelor of Arts, Ethnomusicology - Jazz Studies   GPA: 3.47   August 2017

SKILLS/TECHNOLOGIES

- C++, C, Java, Python, MATLAB, HTML/CSS, bash, Git, GitHub, OpenCV, NumPy, LaTeX, UNIX, MacOS, Linux (Ubuntu, Red Hat, Raspbian), Arduino, ROS, Windows, Jenkins, AssertJ

WORK EXPERIENCE

- **NASA – Robotics and Computer Vision Intern** (June-August 2019)
  - Developed computer vision system using OpenCV to track simulated agents, predicting their trajectory in real-time
    - CV system creates a baseline for future work in autonomous GNC for various robotic platforms by creating paths that avoid collisions in dynamic environments
  - Presented results of work to branch-level management at NASA KSC
  - Wrote grant application to internal NASA KSC funding stream for heterogeneous decentralized multi-robotic system for In-Situ Resource Utilization
  - Wrote a paper on Path Prediction for Robot Collision Avoidance
- **NASA – Control System Software Development Intern** (January-May 2019)
  - Worked on Class A safety-critical ground control software
  - Participated in full software development lifecycle using agile processes, used source control and work tracking software on Linux environment, gave regular status to various levels of management (technical and managerial)
  - Used Java to change implementation of test framework event processing utility which eliminated over thirty intermittently failing unit tests and decreased time required to compile the codebase and run tests
  - Used Python to write a script to parse JSON API data from user-specified streams on a Jenkins automation server and create a CSV file to provide a convenient way for developers to see the history of failing tests
- **NASA – National Community College Aerospace Scholar (NCAS)** (April-October 2018)
  - Wrote software for an autonomous rover (EV3) that used light and touch sensors to navigate mock Martian terrain
  - As one of the top performing students in NCAS, was invited back as one of two students for a subsequent NASA workshop to assist with events, competitions, and other activity coordination

SELECTED PROJECTS

- **NASA – Micro-G NExT Student Design Challenge**
  - Created quintessence.technology, worked on tool design, proposal, test plan, and managed finances
  - Project proposal was selected as 1 out of 24 to advance to onsite testing at NASA's Johnson Space Center
  - Taught Neutral Buoyancy Laboratory (NBL) divers to use tool and was the test conductor for testing in the NBL
- **FIRST Robotics Competition – Mentor (Pink Team #233)**
  - Wrote Java control programs and worked on assembly and troubleshooting of hardware subsystems
- **Hardware/Embedded Programming**
  - Built a computer after doing research to optimize compatibility of computer parts, installed multiple operating systems (triple boot): Windows 10, Ubuntu, Hackintosh
- **SMC Robotics Club – Operations Manager**
  - Use Kanban to organize task structure, assist with planning hardware and software implementation strategy
  - Participant in VEX U competition, design and program robot for Tower Takeover competition (in progress)
  - Use Turtlebot3 running ROS as a testbed for sensory input processing, SLAM, and autonomous navigation

NOTABLE AWARDS

- Winner of "Best IoT that Incorporates Multiple Nodes" challenge hosted by Northrop Grumman at SD Hacks '19
- UCLA Dean's List; Santa Monica College Dean's List; Member of Alpha Lambda Delta|Phi Eta Sigma honor society
- Winner: Angel City Arts Young Artist Competition; Mimi Melnick Double M Award for New Jazz Talent
- Selected to be 1 of 2 bassists (worldwide) in Berklee Jazz Workshop, 1 of 2 (nationwide) in Vail Jazz Workshop