

Nashir Janmohamed

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EDUCATION

UCLA, COLLEGE OF MUSIC

Los Angeles, CA

Bachelor of Arts, Ethnomusicology - Jazz Studies GPA: 3.47

August 2017

SANTA MONICA COLLEGE

Santa Monica, CA

Computer Science and Engineering GPA: 3.79

September 2017 - Present

SKILLS/TECHNOLOGIES

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

RELEVANT COURSEWORK

- Data Structures; Mechanics; Light, Waves, Optics; Multi-Variable Calculus; Discrete Math; Astronomy

SELECTED WORK EXPERIENCE

- **NASA – Robotics and Computer Vision Intern** (June-August 2019)
 - Developed a computer vision system using OpenCV to track volitional agents and predicts their current trajectories
 - CV system will inform GNC of an autonomous robot by creating path that avoids collisions in dynamic environment
 - Wrote conference paper on Path Prediction for Robot Collision Avoidance; coauthored papers on Exploration Navigation System from Sparse Virtual Model, and Flexible Inverted Pendulum Controller Adaptive Augmentation
- **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 fix over thirty unit tests by changing implementation of test framework event processing utility
 - Used Python to write script to parse automation server JSON and create CSV files of relevant failing test data from user-specified streams
- **NASA – National Community College Aerospace Scholar (NCAS)** (April-October 2018)
 - During onsite portion of program at Armstrong Flight Research Center, 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 AFRC 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
- **FIRST Robotics Competition Mentor (Pink Team #233)**
 - Wrote Java control programs and worked on assembly and troubleshooting of hardware subsystems
- **Used C++ to**
 - Refactor a version of Conway's Game of Life & create a feature that keeps track of births for each cell
- **Used Python to**
 - Make a graphical user interface that calculates distance between two locations by parsing JSON data from Google Map Distance Matrix API, with option for distance by car, bike, or foot
- **Hardware/Embedded Programming**
 - Using Raspberry Pi: wrote Python script to stream video when motion is detected & made an SSH-controlled buggy
 - Built my own computer after doing research to optimize compatibility of computer parts, installed multiple operating systems (triple boot): Windows 10, Ubuntu, Hackintosh
- **Open Source Contributions**
 - Fixed three AssertJ-Swing unit tests, actively working on modifying and adding features

NOTABLE AWARDS

- 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