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AKHIL PALLA

EDUCATION

Computer Science | UCLA 2017 – PRESENT (EXPECTED: 2021)

GPA: 3.99, Relevant Courses: C++, Computer Organization, Linear Algebra, Discrete Mathematics, Algorithms (In Progress), Operating Systems (In Progress)

SKILLS

Languages: C/C++, Python, Java, HTML/CSS/JavaScript

Platforms: Android, Desktop (Qt/pyQt), Web *(React, NodeJS)*, Robotics *(Arduino, Raspberry Pi, NI™ RoboRIO),* Embedded Systems *(PIC/AVR)*

Tools: Git/Subversion, Linux/Bash, Vim, Eclipse/IntelliJ

EXPERIENCE

Mission Operations Manager | UCLA ELFIN CubeSat SEPT 2018 - PRESENT

- Oversee direction of 6 teams within a 30-person NASA space weather mission, using two 3U+ CubeSats with over $3M in joint funding
- Continue to spearhead ground software development efforts with a focus on automation

Software Development Lead | UCLA ELFIN CubeSat JUL 2018 – SEPT 2018

- Designed entire multi-application Python framework for networked ground operations
- Developed a command dispatching system for efficient multi-spacecraft communication
- Oversaw development of data processing and telemetry visualization utilities
- Restructured and developed software for satellite tracking and earth station management
- Taught spacecraft-specific as well as general development skills to members

Command & Data Handling Lead | UCLA ELFIN CubeSat SEPT 2017 – JUN 2018

- Identified and resolved mission-critical risks including parallel microcontroller timing issues, erratic radio behavior, and other flaws with avionics software (written in C)
- Developed a robust early orbit sequence to ensure reliable, autonomous deployments
- Incorporated failsafe modes, telemetry checking, and other fault tolerance measures
- Developed modifications in Assembly to resolve critical issues post-flight hardware
- Characterized flight software behavior to demonstrate fulfillment of mission requirements
- Defended flight software readiness to a NASA chaired review

President | Monta Vista FIRST Robotics Team (MVRT) 2014 - 2017

- Managed high-level direction of a 100-member team, organizationally and technically
- Led restructuring to handle retention, financial sustainability, and leadership accountability
- As project manager, taught strategy-based design skills to the entire team
- Led development of 2014-2015 robot software and of auxiliary R&D projects

PERSONAL PROJECTS

Catan AI: FALL 2017

C++ implementation of the board game Settlers of Catan, with rudimentary AI gameplay

BullsEye JUNE 2016 – FEB 2017

Vision processing and targeting for robots using OpenCV on an onboard Android device

MVRT Scout JULY 2015 – SEPT 2017

System for scouting robotics teams at competitions including 2 separate Android applications for data entry and transmission via QR/NFC, and a web client for real-time data analysis