

# Rithvik Chuppala

US Citizen | 12th grader | 17 years old

## EXPERIENCE/LEADERSHIP

### FRC Robotics – Director, Software Lead, Webmaster

**Director of Outreach**– Valkyrie Robotics: Planned and volunteered for outreach events/demos at local elementary and middle schools

**Software Lead**– Monta Vista Robotics: Led and trained a group of 15 software students. Wrote code for several subsystems of the robot, delegated coding projects to other students, and organized and maintained code that went onto the robot from GitHub

**Webmaster**– Monta Vista Robotics: Regularly updated and maintained MVRT's award-winning website

### Science Olympiad – Executive Officer, Engineering Captain

**Executive Officer**– Helped conduct meetings, handle logistics, plan for events, prepare members for competitions, and make decisions for the club.

**Engineering Captain**– Helped members from all 3 MVSO teams, by giving design and construction advice, helping test and prototype their devices, and managing costs and budgeting for the devices.

### Naval Postgraduate School – Research Intern

Worked on an Airfield Damage Assessment project that uses computer vision, UAV technology, and GPS navigation to localize and assess damage done on a damaged military air strip. Built an Android app that provides navigating capabilities to the drone, including waypoint navigation, manual flying, livestream video, and positioning data

### Huawei IOT Department

Built an Arduino Robot Arm and an infrared sensor vehicle for the IOT Department of Huawei.

### Teaching and Volunteering

Coordinated a hands-on engineering and physics program, making the curriculum and organizing its implementation at various elementary schools.

Led a group of students who went to Columbia Middle School, a local low-income middle school, and taught the children basic robotics and engineering concepts through a project-based curriculum

### MV Phys Eng– Director of Engineering

Conducted meetings and held presentations on hardware and engineering topics. I also mentored and tutored students for AP Physics, teaching concepts and holding review sessions before tests

### Students and Seniors United– Co-Director of Research

Researched new and innovative ways to help senior citizens in our community, as well as collected data to identify trends and issues

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## EDUCATION

**Monta Vista High School** 2015-2019(exp.)

GPA: **4.58 W(4.00 U/W)** | SAT: **1600**

Selected Coursework: AP Calc BC, AP Chemistry, AP Physics 1, APCS, AP Stats

### Foothill College and West Valley College

Coursework: CS 1A, CS 30A, CS 3A, Math 4C

## SELECTED AWARDS

2017 FRC National Championships– **2nd Place in Division**

2018 Regionals Science Olympiad– **3rd**

2018 States Science Olympiad – **5th**

2018 Regionals Sci Oly– Hovercraft– **2nd**

2017 States Sci Oly – Robot Arm– **5th**

2017 Cal Cup Quiz Bowl– **1st Place JV**

2015 Youth Focus Talent Competition– **Grand Champion**

## SKILLS

**Programming Languages:** Java, Python, C++, C, HTML/CSS, JavaScript, PHP

**Tools:** Git, Web Development, Arduino, Raspberry Pi, Open CV

**Platforms:** ROS, Arduino, WPI Lib, Android, Raspberry Pi

## PROJECTS

**Security System:** DIY, rudimentary security system using Arduino and Open CV

### Voice-Command Medical Assistant:

Listens to symptoms and would subsequently respond with a diagnosis using Raspberry Pi

### Voice-Command TurtleBot Simulation:

A simulated robot that uses voice-command to move around a house using ROS and C++

