# Sohan Vichare

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## OVERVIEW

Self-starter, quick-learner, hardworking high school junior passionate about the intersection between robotics, computer vision, and design. I spend my free time working on computer vision code for Cupertino High School's Robotics Team or rehearsing for an upcoming play/musical.

## PROJECTS

**Software Intern, Airphrame; San Francisco, CA June to September 2016**
Built a platform to automate Pix4D processing jobs across ten dedicated computers in Scala, Typescript, and PowerShell. Modified landing code to optimize aircraft landing speed and remove unneeded/dangerous waypoints. Bug fixes.

**Hawkeye: Unmanned Search and Rescue Missions through Intelligent Drones Guided by Computer Vision and Dynamic Pathfinding July 2015 to March 2016**
Assembled an autonomously controlled 3DR Y6 drone, modified to hold a Raspberry Pi and Camera with the capability to identify and count people from above and guide these people to previously designed "safe" location. Implemented the D*Lite pathfinding algorithm in C++ and Python (based on this paper http://idm-lab.org/bib/abstracts/papers/aaai02b.pdf). (Project link: https://github.com/sohanvichare/AutoDrone)

## EXPERIENCE

**Computer Vision with OpenCV**
Built Raspberry Pi/Pi Camera based realtime ball tracking system for the Cupertino High School Robotics team. Wrote code that finds and aligns robot to reflective tape. Worked on realtime person detection code using a self-trained classifier.

**iOS and Web development**
Experience in iOS (Swift and Objective-C) and Web (Typescript, AngularJS, Ionic Framework). Self-taught. (Github: https://github.com/sohanvichare)

## AWARDS

1st Place Mechanical Engineering @ Synopsis Science Fair, 4th Place in Computer Science @ California State Science Fair, Winner @ Stanford Health++ Hackathon (https://devpost.com/software/dermyx), Winner @ Los Altos Hacks (https://devpost.com/software/swiftassist-j6r9s2), Winner @ BASEHacks (https://devpost.com/software/robovision), California Arts Scholar - 2015, Stanford ProCo Computer Science Competition Special Round 1st Place Winner, Association of Computational and Math Modeling Gamma Prize Winner (top 15%) - 2015