

# Thomas Qian

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## EDUCATION

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### Bachelor of Science, Computer Engineering

UC San Diego. GPA: 3.57

Expected Graduation: March 2017

#### Relevant Coursework:

- Intro. Artificial Intelligence
- Design and Analysis of Algorithms
- Advanced Data Structures
- Computer Organization and Systems Programming
- Software Engineering and Object Oriented Design
- Intro. Theory of Computation

## TECHNICAL EXPERIENCE

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### Software Engineering Intern, Northrop Grumman, San Diego, CA

June 2016 – Present

- Execute test cases for qualifications testing and log anomalies in software performance
- Automate test cases in Visual Basic that would require over 50 hours to run by hand
- Design requirements and write unit tests to verify desired functionality of custom software

### Software Team Member, Yonder Dynamics, La Jolla, CA

Mar. 2016 – Present

- Reproduce stereoscopic imaging technology to allow rover to perceive depth through its cameras
- Design and implement a heads-up-display to overlay sensor data on a realtime stream using openCV
- Taught team members graph algorithms like Dijkstra and A\* to develop pathfinding capabilities

### Software Team Member, KaiX, La Jolla, CA

Jan. 2016 – June 2016

- Perform user research and interviews to design a robot that meets needs in senior caretaking industry
- Explore open source machine learning software including TensorFlow and NeuralTalk
- Reproduce facial recognition and object detection capabilities using openCV and cascade classifiers

### Software Team Member, Grand PrIEEE, La Jolla, CA

Nov. 2014 – May 2015

- Designed and built an autonomous racecar using the BeagleBone Black development platform
- Programmed optical binary track recognition in C++ using openCV in a Linux environment
- Devised control feedback algorithms that allowed the car to navigate a 300ft track in 50 seconds

## LEADERSHIP EXPERIENCE

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### Workshop Instructor, Divergent Engineering at UCSD, La Jolla, CA

Sept. 2015 - Mar. 2016

- Design curriculum to teach software and hardware engineering concepts through robots
- Instruct workshops using Arduino, coaching students through applicable personal projects
- Motivate interdisciplinary students to collaborate on projects tackling real-world problems

### Instructor and Teaching Assistant, Digital Media Academy, La Jolla, CA

June 2015 - Aug. 2015

- Taught Arduino C, Java, circuits, and engineering using hands-on, group, and one-on-one instruction
- Developed and prepared an engaging and rewarding curriculum using limited resources
- Guided students through projects including a touch-pad morse code to letter converter with LED display

## SKILLS

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- **Computer Programming:** Proficient: C++, C, Java; Experience: Python, MATLAB, ARM Assembly
- **Software:** Vim, Git, Eclipse, NetBeans, Visual Studio, gdb, Valgrind, openCV, OpenGL, Android Studio
- **Interpersonal Skills:** Problem-solving, leadership, teamwork, communication, flexibility