

CHEN CHEN

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Education

Bachelor of Science, **Computer Science and Engineering**
University of California, Davis

Expected Graduation: **2017 June**
Cumulative GPA: 3.83 / Major GPA: 3.9

Skills

Programming/Scripting Languages: C/C++/C#, Java, Python, R, MATLAB, JavaScript/Node.js, SQL, Lisp, Prolog, Assembly, Bash/csh

APIs and Extensions: CUDA, OpenGL, OpenMP/OpenMPI/OpenACC, Unity3D, Embedded/Distributed Systems

Tools and Systems: [Git](#), Linux, Robot OS, Real-time OS

Work Experience

Software Engineering/System Integration Intern, [Robby Technologies](#), Palo Alto, CA 2016 Jun. – 2016 Sept.

- Integrated motor controllers of autonomous delivery robots (SLAM-capable and running on AWS) with cameras, GPS, and proximity sensors on Ubuntu ROS platform using C/C++, Python, and Catkin.
- Programmed control interface for the robots to receive motor commands from 4G/LTE networks via socket.io.
- Carried out pilot delivery tasks, on-site debugging and data collection, and helped Robby with next round of funding by organizing product demos and pitching to investors.
- Reported by TechCrunch as [one of the top startups for Y Combinator S16 Demo Days](#) (featured in the GIF).

Projects and Design Team Involvements

Senior Design: Large Scale Mixed Reality Project with a Drone as Camera Platform 2016 Dec. – 2017 Jun.

- By meshing the virtual world (built in Unity3D with C# and Oculus Rift APIs) accurately with the real world, users can create and interact with virtual objects. Implemented intuitive batch/singular brick creation with Oculus Touch.
- Compressed and streamed video wirelessly from a 3DR Drone with OpenGL and C#/Python Scripts.
- Maintained project website with Node.js and Express. Dynamically rendered blogs with jQuery and RESTful.
- Store and share program and user data with AWS NoSQL, Spring MVC with RESTful and Java to achieve multi-user mixed reality experience for large scale event planning, MR gaming and interactive business demo. (ongoing)
- Selected to represent ECS Department and demo on the [UC Davis Decision Day 2017](#).

Multiplayer RTS War Game Development: Multiplayer Team

2017 Jan. – 2017 Mar.

- Designed cross-platform multiplayer communication protocol (UDP/TCP/IP) and network APIs in C++/Python.
- Enabled username, map and player color exchange for LAN/Internet games and command line/voice messaging.

AT&T Family Plan Automatic SMS Reminder

2016 Dec.

- Automated the process of splitting monthly bill among 8 people in my family plan and sending SMS reminders.
- Performed web scrapping from AT&T account page by parsing HTML trees and making XPath requests using Python scripts.
- Generated customized personal account information in JSON. Securely connected to AWS with OpenSSL and used Amazon SNS to send text messages with RESTful APIs to all family plan members regarding payment.

Operating System/Distributed System/Parallel Programming Challenges

2016 Jan. – 2016 Jun.

- Implemented additional Linux functionalities in C such as process/thread/kernel information display page on a Minix distro by working with keyboard interrupts and changing the source code of the operating system.
- Utilized distributed system and local GPU/CPU to perform image processing, NMF and other paralleled tasks in C/C++ with the help of OpenMP/OpenMPI/OpenACC, CUDA and R packages.
- Deployed and configured distributed nodes with R as a scripting language, balanced availability and consistency.