Gera Groshev

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Education

University of California, Berkeley | B.S. EECS | Dec 2017 **Cumulative GPA:** 3.6

Cosumnes River College | A.S. Electrical/Computer Engineering/Mathematics | May 2015

Technologies: **Python, Java, C,** C++, Swift, MIPS, Scheme, SQL, HTML, CSS, jQuery, OpenMP, SSE, Vuforia, LabVIEW

Relevant Courses

- Operating Systems
- Embedded Systems
- Artificial Intelligence
- Machine Structures
- Discrete Mathematics and Probability Theory
- Database Systems
- Data Structures
- Signals and Systems
- Designing Information Devices and Systems I&II
- IEEE Micromouse Robotics

Experience

Software Engineering Intern – Qualcomm – San Diego, CA May 2017 – Aug 2017

- Project 1: Unity Snapdragon VR app showing colored spinning rings, which was used for testing
- Project 2: Worked with Tango/VR team to display textures created by their API via WiFi display. This involved reading OpenGL textures and communicating with WiFi display code included as part of the Android build
- Implemented project 2 at the system level which will eventually impact all Qualcomm VR enabled Android devices

Teaching Assistant for iOS Development – UC Berkeley Jan 2017 - May 2017

- Acted as a project mentor and taught concepts and best practices for the Swift language
- Coordinated and aided in running iOS development labs, held office hours, and graded assignments

Principle Course Designer – Sacramento, CA May 2016 - Aug 2016

- Co-founded a college engineering club that challenges students by signing them up for competitions
- Organized and wrote material and mini-projects to introduce C, Arduino, and electrical circuits

Team Lead for SMUD Solar Regatta – Sacramento, CA Nov 2014 – May 2015

- **Achieved Awards: Judge's Choice, Best Technical, Best Design, Most Artistic, Best Video**
- Led the electrical and controls design team in the design of a solar powered boat for a solar regatta competition
- Designed an autonomous sun tracking device and algorithm. Used Arduino microcontroller, motors, and sensors

Select Projects

Pet Detective – TreeHacks 2017 – Stanford – Google Cloud Vision, Python, HTML, CSS, JavaScript Feb 2017

- **1st Place Winner, Best Use of Google App Engine**
- Pet Detective is a chatbot service and analytics platform that uses computer vision to help locate lost pets

Air Doodle – Gesture Recognition Toolkit (GRT) for Deep Learning, Python, C++ Oct 2016 – Dec 2016

- Glove device classified gestures as characters. Raspberry Pi, Arduino, and LED matrix to display the characters
- Used 9 axis sensor, sensor fusion library, and open source gesture recognition toolkit for ML to train on samples

RNDR – Cal Hacks 3.0 - UC Berkeley – Swift, Objective-C, Vuforia, Unity, Google Maps API Nov 2016

- RNDR is an AR social network where the augmented world is one big social media post
- Implemented the iOS front end using Swift and helped integrate the Unity3D Vuforia scene with Swift

Voice Controlled Robotic Vehicle – iPython, MSP430 Microcontroller Mar 2016 – May 2016

- Implemented a robotic car capable of recognizing and reacting to natural language commands
- Implemented speech recognition using SVD and PCA linear algebra techniques

Text Editor – Java, JavaFX API Feb 2016 – Mar 2016

- Implemented a combination of data structures for efficient text buffering, rendering, cursor movements, insertion and deletion, undo and redo operations, and scrolling. Used JavaFX for GUI, text positioning, and file processing

Accomplishments

- **TreeHacks 2017:** 1st Place Winner, Best Use of Google App Engine
- **SMUD Solar Regatta:** Judge's Choice, Best Technical, Best Design, Most Artistic, Best Video
- **Solar Powered Trash Compactor:** $5000 grant, Excellence in Engineering, Best Energy Award, Top 3 in Engineering
- **MTHS Industrial Technology Departmental Award**
- **MTHS Design and Technology Academy Scholarship**
- **MESA Scholarship**
- **Best Video Game**
- **President's Volunteer Service Award**