Gera Groshev

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Education

University of California, Berkeley | B.S. EECS | Dec 2017 **Cumulative GPA:** 3.7

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

Spring 2017:

- Operating Systems
- Database Systems

Completed:

- Embedded Systems
- iOS Development
- Artificial Intelligence
- Machine Structures
- Discrete Mathematics and Probability Theory
- Data Structures
- Structure and Interpretation of Computer Programs
- Signals and Systems
- Designing Information Devices and Systems I&II
- IEEE Micromouse Robotics

Select Projects

Air Doodle – Gesture Recognition Toolkit (GRT) for Deep Learning, Python, C++ October 2016 – December 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 November 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 March 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

Bear Maps Raster and Route AI – Java April 2016

- Used a quadtree for map rastering and used lazy loading to load high resolution map tiles in response to zoom
- Parsed the OSM XML copy of OpenStreetMap database and implemented the AI to find shortest route

Text Editor – Java February 2016 – March 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 API for the GUI, positioning of text objects, and file processing

Experience

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

- Act as a project mentor and teach concepts and best practices for the Swift language
- Coordinate and aid in running iOS development labs, hold office hours, and grade assignments

Lab Assistant for Data Structures (CS 61B) – UC Berkeley May 2016 - August 2016

- Provided guidance to students taking the Data Structures course at UC Berkeley

Principle Course Designer – Sacramento, CA May 2016 - August 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 November 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

Accomplishments

- **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**