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

Pet Detective – TreeHacks 2017 – Stanford – Google Cloud Vision, Python, HTML, CSS, JavaScript February 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++ 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, JavaFX API 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 for GUI, positioning text, 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

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

- **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**