David Hirschberg

6626 Telegraph Ave, Oakland CA, 94609   (949) 910-1734   www.rasdasd.com   dave.hirschberg@gmail.com

Education

University of California, Irvine   **Irvine, CA**

June 2016   PhD Candidate, Masters of Science in Computer Science
- Data Science Fellow
- Relevant Courses: Algorithms, IR, ML, AI, Sci Computing, Dist Comp Sys, Next Gen Search

Dec 2013   Bachelor of Science in Mechanical Engineering with Honors
- Minor in Information & Computer Science

Experience

Jam City   **San Francisco, CA**

2016 -
May 2017   *Software Engineer – Juice Jam – 3 million DAU – iOS, Android, Facebook*
- Engineered and maintained content, features, updates, and tools on client & backend software
- Reduced loading times by 50%, Targeted promotional offers, Arabic localization led to featuring
- Created machine learning models to predict player behavior, explored deep Q-nets for CRM

University of California, Irvine   **Irvine, CA**

2014-2016   *Teaching Assistant, Computer Science Dept.*
- Taught and reviewed *Design & Analysis of Algorithms*: graph, greedy, D&C, DP, network flow

2014-2016   *Graduate Student Researcher, Computer Science Dept.*
- Mapped family longitudinal identifiers in confidential census microdata
- Modeled and analyzed dependency graphs of open source projects: Apache, SourceForge, etc
- Calculated energy storage and losses in components of energy harvesting embedded systems

Tarbut V' Torah   **Irvine, CA**

2013-2014   *STEM Mentor*
Role model and resource for high school STEM course students
- Mentored and guided students in various projects, *e.g.* OTA speaker, SCUBA disinfector, concussion detector, cooking recipe website, distance detecting guide cane, and many more

Orange County Transportation Authority   **Orange, CA**

2012-2013   *Consulting Software Developer*
- Developed prototype of hiring assistive software to be implemented by in-house team
- Designed and formalized top *k* of *n* characteristics algorithm (tournament vs max-heap)
- Created rapid prototype, documented, and explained algorithm for in-house team

Atarem Website Solutions   **Newport Beach, CA**

2011-2016   *Web Application Developer*
Front and back end developer working in conjunction with web designer and client needs

Projects

WaitLess
Lead Architect and Machine Learning Developer
Lead a team of CS students to create a mobile web application to predict wait times at dining locations
- Designed architecture and managed team in implementation for scalable use
- Created, tested and tuned time series predictive machine learning algorithm

Scrabble Detector
Developer
Solo project, created a Scrabble board detector in Matlab to classify a Scrabble board from an image
- Researched methods for image segmentation, perspective correction, grid placement, and OCR
- Developed the above techniques to create a logical representation usable by third parties

Hands to Drums
Lead Designer and Framework Developer
Lead a team of CS graduate students. Created Android app that classifies various types of hand beats on table into specific drum beats.
- Designed and developed Android high level framework surrounding supervised ML techniques
- Lead and managed team in implementation of various ML algorithms for consensus algorithm

Search Engine
Developer
Solo project, created a search engine indexing UCI's ICS servers
- Implemented crawler in Java to crawl, index, and store pages and documents
- Created a full inverted index using MapDB and precomputed values, *e.g.* tf-idf
- Designed ranker using tf-idf, cosine similarity, anchor text, PageRank variant, and more

Skills and Interests

- **Technical Languages**: Python, Java, JavaScript, Matlab, AS3, TensorFlow, Spark ML
- **Languages**: English (Native), Hebrew (Native)
- **Interests**: Volunteer cook at Chabad, traveling locally and abroad, eSports, ΑΕΠ, Board Games