Tal Aharon

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About Me

As a chemist turned software developer, I've used my passion for tough problems as a catalyst for my transition into engineering. Whether writing code for molecular simulations, working with databases, or building full stack web-apps, I channel my passion for learning and exploration into all of my work.

Education

2014–2019	**Ph.D. Chemistry,** *University of Kansas*, Lawrence, KS
Summer 2015	**MolSSI Software-Development Bootcamp**, Blacksburg, VA
2008–2012	**B.S. Chemistry,** *University of Massachusetts*, Amherst, MA

Skills

Python, Pandas, Bash, Fortran, LaTeX, Agile/Scrum, HTML5, CSS3, Bootstrap, AWS, RESTful APIs
React, JavaScript, jQuery, AJAX, MongoDB, Mongoose, Express, Node, Ruby, Rails, PostgreSQL

Work History

Research, Analysis, and Development

2020–2020 **Software Engineering Fellow,** *General Assembly*, Boston, MA
- Full time 12 week 500+ hour program focused on full stack development using modern programming techniques.
- Built client side applications with responsive behavior using JavaScript, React, HTML5/CSS3, jQuery, and AJAX.
- Built RESTful APIs to store data for web-apps using Rails and SQL (PostgreSQL) or Express with MongoDB.
- Worked in 4-day sprints while practicing Agile methodology, Scrum principles, and using MVC frameworks.

2014–2019 **Researcher,** *University of Kansas*, Lawrence, KS
- Used Python to automate workflow and model or analyze data.
- Added new functionality to Gaussian, a high performance scientific computing software, using Fortran.
- Designed/coded an efficient method to predict molecular properties, decreasing simulation duration by up to 10x.
- Optimized simulation process to reduce duration by up to 80%.
- Worked collaboratively with experimental chemists to study the origin of molecular properties.
- Managed undergraduate research projects by meeting with students for updates and to provide direction.
- Prepared, presented, and published research results in local/national scientific meetings and academic journals.

Teaching and Mentoring

2014–2019 **Graduate Teaching Assistant,** *University of Kansas*, Lawrence, KS
- Lab/Lecture Teaching Assistant
  - Managed six people in a fast paced environment while developing course material for students.
- Undergraduate Mentor
  - Acted as lead point of contact between undergraduate research students and head researcher.

Software Projects

All projects built using JavaScript, CSS3, HTML5, Bootstrap, and Git/GitHub for version control

Aegir's Corner   *Tech: React, Express, Mongoose, MongoDB.*
- Built a responsive full stack SPA allowing users to record recipes for brewing beer.

Tome   *Tech: Express, Mongoose, MongoDB, AWS S3.*
- Built a full stack SPA where users can create posts, and comment on and favorite other user's posts

Board Game Tracker   *Tech: Ruby, Rails, PostgreSQL.*
- Built a full stack SPA to store a user's board game library and record games played