Val Hovey

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Education

- **Utah State University** — Logan, UT
  Computational Mathematics (BS); GPA: 3.88; Magna Cum Laude — *Aug 2015 – Dec 2018*
- **Cuesta College** — San Luis Obispo, CA
  Three semesters to transfer; GPA: 3.95 — *Jan 2014 – May 2015*

Experience

- **Mercury Technologies** — San Francisco, CA
  Senior Software Engineer II (IC4) — *May 2023 – Present*
  - **Automatic Receipts Matching**: Authored spec and implemented automatic receipts matching at Mercury, used by thousands of orgs and over $100M in transactions with an average match rate of 90%
  - **Departments**: Authored spec and built BE framework for Departments abstraction in collaboration between multiple teams
  - **Automatic Categorization**: Authored spec and implemented automatic category to GL code mapping with third party syncing used by thousands of organizations
  - **Transaction Enrichment**: Implemented transaction categorization and enrichment backends
  - **Mentorship**: Collaborated on technical interview rubrics and mentored new hires on Haskell
- **Brilliant Worldwide** — San Francisco, CA
  Senior Software Engineer — *Oct 2021 – May 2023*
  - **Web Platform and Infrastructure - Tech Lead**: Served as Tech Lead on an ambitious project to rewrite Brilliant's frontend codebase with React/GraphQL/NextJS.
  - **Interactives Experience Pod**: Developed and planned interactive features to enrich learner experience, including gamification of learning with Leagues.
  - **Authoring Team**: Collaborated on a versatile lesson editor that enables producers to create world-class interactive STEM lessons.
- **Atomic Jolt** — Logan, UT
  Software Engineer — *Jun 2018 – Oct 2021*
  - **Learnosity Connector**: Contributed to the Learnosity Connector project which enables teachers to author course content in Canvas via the popular Learnosity service.
  - **Socialize**: Developed new elements of Atomic Jolt's Socialize platform for polls and discussions between students.
  - **Waymaker**: Collaborated with Lumen Learning on the Waymaker project and developed educational workflow software.
  - **Atomic Insight**: Led the Insight project to replace Canvas Analytics with a novel LTI stack written in Go+React to deliver customized metrics into Canvas Courses
- **USU Power Electronics Laboratory** — Logan, UT
  Software Engineer / Research Assistant — *Jan 2016 – Jun 2018*
  - **Square One – Altium Library Management System**: Created a system using Node+Express for mass-submitting tickets for new parts to be added to our in-house Altium Database and verified by librarians.
  - **CAN Data Graphing Utility**: Created a application for generating and sharing graphs of terabytes of data accrued in the AMPED battery life extension project.
  - **Battery Embedded Development**: Contributed to battery firmware updates to publish sensor data on a CAN bus

Achievements

- **USU - Magna Cum Laude**: Graduated Magna Cum Laude in the Computational Mathematics program at USU
- **USU Hackathon (2016 – 2018)**: Took first place three years in a row at the Utah State University intercollegiate hackathon
- **Cuesta College FBSA (2015)**: Awarded the Frank Brown Science Award for outstanding academic achievement.

Projects

- **8-Bit Spaghetti**: Designed and built 8-bit processor using TTL. Helped many students around the world build versions of the design.
- **AQI IoT Devices**: Developed multiple air quality IoT devices including a portable MQTT enabled PM2.5/CO2/NOX/VOC/Temp/Humidity device on ESP32
- **RGB Fairy Lights**: Developed and built individually addressable RGB fairy lights controllable over Home Assistant via MQTT
- **Dream Cloak LED Display**: Designed and built a 15x30 24-bit wearable RGB LED display and a web app to control it wirelessly, all in five days.
- **Automata Research**: Developed novel approach to classifying all Life-Like Cellular Automata by a similarity metric.

Technical Skills

- **Languages**: Haskell, C++20, Python, Typescript, Ruby, SQL, Bash, LaTeX
- **Technologies**: Postgres, Yesod, NextJS, Node, React, Svelte, Arduino, ESP32