Cole Perschon

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Experience

- **Amazon**
  Software Development Engineer Seattle, WA 07/2021 — 01/2023
  - Added fulfillment channel to the Amazon order document, touching all new orders (∼1.6MM daily).
  - Led 21 engineers from the Easy-Ship Team as the subject-matter expert (SME) in data engineering.
    * Designed and implemented a fast read alternative to DW tables using **Python**, **SQL**, streams, and reverse ETL.
    * Implemented data pipelines for service API metrics tables E2E using **Java**, **SQL**, and notification queuing.
    * Owned and maintained 15 DW tables including, pipelines, data quality, and international expansion.
  - Lead the launch of fragile badging feature, reducing returns due to damage by 25% and saving $0.2MM annually.
  - Won 2nd (out of 85 teams) in the 2022 Seller & Fulfillment Tech Hackathon with an AR package measurement app.
  - Led a team of 8 engineers in best practices as Scrum Master; drove creation of automated code reviewer assignment.
    * 24/7 oncall for 840 hours total, debugging issues in production services and implementing fixes in real time.
    * Communicated with engineering and business stakeholders to gain alignment on technical and product decisions.
    * Started a "learning over lunch" knowledge sharing series and mentored 2 new hires on team's software.

- **Amazon**
  Software Development Engineer Intern Seattle, WA 05/2020 — 08/2020
  - Worked with the Easy-Ship Team to integrate an ML model, that identified fragile orders, into seller scheduling.
  - Designed and developed a serverless REST API using **Java** and **AWS Lambda** to connect with ML model endpoint.
  - Developed the front-end badge and tooltip components using **TypeScript**, **React**, and Amazon UI library.

- **University of Utah Kahlert School of Computing**
  Research Assistant Salt Lake City, UT 01/2020 — 05/2021
  - Worked with Theory in Practice Group led by Blair D. Sullivan optimizing algorithms on unstructured networks.
  - Developed a novel synthetic graph generator in **C++** to produce graphs with a bounded distance to treewidth k.
  - Contributed to the Structural Rounding project (v2.0) in **C++** by adding algorithms for new problems.

- **L3 (now L3Harris)**
  Software Engineer Co-Op Salt Lake City, UT 05/2018 — 12/2018
  - Worked with the User Interface Team to build web-based GUIs for the VORTEX airborne transceiver.
  - Developed a tool to visualize and remove jamming frequencies using **TypeScript**; deployed on Global Hawk.
  - Migrated the team's CSS libraries from Bootstrap 3 to Bootstrap 4.

Education

- **University of Utah** Salt Lake City, UT 2016 — 2021
  Bachelor of Science (B.S.) in Computer Science
  Bachelor of Science (B.S.) in Applied Mathematics

  Computer Science Coursework:
  - CS 4400 – Computer Systems
  - CS 5140 – Data Mining
  - CS 5150 – Advanced Algorithms
  - CS 5340 – Natural Language Processing
  - CS 5460 – Operating Systems

  Mathematics Coursework:
  - MATH 2270 – Linear Algebra
  - MATH 3210 – Foundations of Analysis I
  - MATH 3220 – Foundations of Analysis II
  - MATH 5600 – Survey of Numerical Analysis
  - MATH 5770 – Introduction to Optimization

  Advisor: Blair D. Sullivan
  Thesis: *Structural Rounding on a Parameterized Graph Class using Heuristics*
  Honors: Undergraduate Research Scholar Designation (URSD), Half Tuition Merit Scholarship, Honors College

Software Projects

- Net Worth Calculator 11/2021
  Minimalistic command line tool written in **Python** which retrieves banking information using the Plaid API.

- Natural Playlist Generator 09/2019
  Song similarity comparison tool written in **Python** based on dimensionality reduction of song fields. What makes this unique is that it can compare *any* raw audio files, not just published songs possessing categorical metadata.