Theodore Liu

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EDUCATION

Harvard University   Cambridge, MA
Bachelor of Arts in Computer Science; High Honors; GPA: 3.92   *Sep 2016 – May 2020*

EXPERIENCE

Gusto   San Francisco, CA
Software Engineer   *Oct 2020 - Present*

- **Gusto Embedded Payroll**: Gusto Embedded Payroll is an API to allow any company to embed payroll into their platform. Built first beta iterations of endpoints for MVP launch. Designed and implemented general idempotency key system for all HTTP endpoints.
- **Hawaiian Ice**: Hawaiian Ice is Gusto's health insurance organization, which helps small businesses provide insurance to their employees. Built automation pipeline to ingest plan and rate information from national health carriers so that Gusto could automatically qualify companies for insurance.

D. E. Shaw   New York, NY
Quantitative Developer   *Jun - Aug 2019*

- **Coresets**: Researched and implemented a coreset machine learning algorithm to reduce datasets from hundreds of GBs to datasets that can fit on a single machine.
- **numpy Static Analyzer**: Designed and built a numpy static analyzer that catches dimensionality errors using SMT solvers and dependent type theory.

Google   Mountain View, CA
Software Engineer   *Jun - Aug 2018*

- **Chart Parser**: Designed and implemented chart parser application that centralizes and eases the configuration of charts rendered on mobile applications using the Dart programming language and Flutter framework. Integrated chart parser into Google's internal mobile CRM for AdWords.

Capital One   Schaumburg, IL
Associate Software Engineer   *Jun - Aug 2017*

- Automated the creation and upload of files necessary for auditing purposes using Node; deployed with AWS Lambda and Cloudwatch; reduces 20-minute task to 10 seconds. Completely rewrote an outdated and overengineered Java Server Pages application using React, Redux, and Express; tremendously simplified build and deploy process. Built proof-of-concept login flow using React, Redux, and AWS Rekognition

ACTIVITIES

The Harvard Crimson   Cambridge, CA
Technology Chair   *Jan 2018 - Dec 2019*

- Architected and implemented the Crimson's website using modern technologies and better code practices. Managed a team of 20 associates to maintain, update, and improve the CMS powering https://www.thecrimson.com. Reviewed and merged changes made by associates; designed interesting and important projects for associates to undertake. https://www.thecrimson.com receives 17 million page views a year

Datamatch   Cambridge, CA
Director   *Mar 2018 - Mar 2020*

- Oversaw and managed the Datamatch organization – interfaced with teams at over a dozen colleges/universities, made deals with local businesses, and directed an engineering team of 10 people. In 2019, Datamatch was taken at 14 colleges and universities and had over 25,000 users

Harvard University   Cambridge, MA
Teaching Fellow   *Sep 2017 - May 2020*

- Worked as a teaching fellow for CS 153: Compilers; CS 181: Machine Learning; CS 61: Systems Programming; CS 51: Functional Programming and Abstraction; CS 50: Introduction to Computer Science.
- Led sections, taught students about new concepts; held office hours to assist students on homework; graded homework, exams.

PROJECTS

- **Kipp**: Slackbot to fetch images from Google Image Search. Website at https://fetchkipp.com/.
- **OCaml Linter**: Linter for OCaml code using menhir, ocamllex, and OCaml. Detects over-length lines, mismatching delimiters, and poorly styled code; performs basic type inference.
- **Languages and Technologies**: Ruby; Python; Javascript/Typescript; OCaml; C; Dart; Java; Flutter; React; Rails; GraphQL; Redux; Django