JEREMY HSU

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EDUCATION

Harvard University | B.A. in Computer Science   May '24
Relevant Coursework Functional Programming · Design of Useful and Usable Interactive Systems · Linear Algebra and Differential Equations · Introduction to Computer Science · Multivariable Calculus
Clubs & Organizations Datamatch · Harvard Computer Society

EXPERIENCE

Cisco Systems | Software Engineer Intern – Webex Media Engine   San Jose, CA
C++, Python, Elastic, Jenkins, Apache Airflow   May '20 – Present
- Working directly on the build pipeline to expand audio and digital signal processing capabilities of the Meetings client app.
- Writing automation scripts that query Webex's cloud servers for problematic Meetings and Teams logs and call internal API endpoints to download selected reports for further analysis, helping Webex engineers locate logs over 50% faster.
- Creating interactive dashboards that visualize critical system, app, and network performance metrics, helping engineers identify trends and potential problem areas more quickly.
- Designed and implemented a new internal debugging tool, accessible as either a command-line application or Jenkins job, which builds a formal audio analysis report easily interpretable by Cisco TAC specialists when talking to users.

Datamatch | Software Developer – Algorithm Team   Cambridge, MA
Python, Word2Vec, Doc2Vec   Sep '19 – Present
Datamatch is a matchmaking service that connects and sponsors meals for students based on their personality compatibilities.
- Currently researching the impact of the Word2Vec algorithm and Doc2Vec embedding model on weighting questions and responses based on keyword relevance.
- Implemented the Gale-Shapley algorithm as a subset of Datamatch's full algorithm to provide stable and efficient matching for February 2020 users.
- 2020 site handled 40,000+ users across 30+ colleges and universities throughout North America including Harvard, MIT, Yale, McGill, and UC Berkeley.

PROJECTS

ML-Powered Spotify Curator   [Python, JavaScript, Flask, React, Scikit-Learn, Spotify Web API]
A full-stack web application leveraging machine learning to help users discover new songs they love. Spotify Curator calls the Spotify Web API to securely authenticate users and store their liked songs' musical attributes as training data. It then performs k-means clustering with Scikit-Learn to determine the percent probability that the user will like any new song or playlist.

OCaml Interpreter   [OCaml]
A metacircular interpreter for a Turing-complete subset of the OCaml programming language. Users are prompted with a graphical REPL and commands are executed based on three distinct semantic models: the substitution model, the dynamically-scoped environment model, and the lexically-scoped environment model.

FoodSpace   [JavaScript, Node.js, React, Redux, Yelp Fusion API]
A full-stack web application streamlining the process of determining meal logistics. Users can search for restaurants based on specified criteria using the Yelp Fusion API and can select a time slot in their calendar based on a chosen restaurant's hours of operation on a given day.

RoommateHub   [Swift, UIKit, MessageUI, Firebase]
An iOS application enhancing the shared living experience for roommates. Features include secure user authentication with Firebase Authentication; synchronized task lists, interactive roommate profiles, and anonymized message forums with Firebase Realtime Database; and integrated iMessage options with MessageUI.

Personal Site   [JavaScript, ReactJS, Firebase]
A full frontend portfolio site hosted on Firebase showcasing my professional and college life, personal projects, and other interests.

TECHNICAL SKILLS

Programming Languages C · C++ · Java · Python · JavaScript · Swift · OCaml
Frameworks & Libraries React · Node.js · SwiftUI · UIKit
Tools & Technologies Apache Airflow · Elastic · Jenkins · Firebase · Figma

ACTIVITIES

Harvard Expressions · USTA National-Level Junior Player