JEREMY HSU

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EDUCATION

Harvard University | B.A. in Computer Science — May '24

GPA 3.84/4.0 · **Computer Science GPA** 4.0/4.0

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 Open Data Project · Harvard Computer Society

EXPERIENCE

Cisco | Software Engineer Intern – Webex Media Engine — San Jose, CA

C++, Python, ElasticSearch, Jenkins, Airflow — May '20 – Present

- Implementing an acoustic echo canceler unit testing framework in C++ for macOS and Windows builds.
- Wrote and maintained multiple internal triage and troubleshooting scripts in Python, which save Webex engineers many hours daily by automating frequent tasks such as searching and downloading available call logs, processing them to detect errors and abnormalities, and categorizing them into relevant problem areas.
- Collaborated with engineers in Asia to implement and deploy an internal data aggregation solution with Python and Airflow that significantly reduced ElasticSearch document upload and Kibana dashboard loading times.
- Created interactive dashboards in Kibana visualizing important media quality and performance metrics to help engineer identify problematic trends more quickly.

Datamatch | Software Developer – Algorithm Team — Cambridge, MA

C++, Python, Sentence-BERT — Sep '19 – Present

Datamatch is a matchmaking service that connects and sponsors meals for students based on their personality compatibilities.

- Implemented response embeddings with Sentence-BERT to improve Datamatch's score function (between two users) accuracy by weighting questions with different responses based on their responses' semantic cosine-similarity.
- Datamatch 2021 connected 42,000+ users across 34+ universities, including Harvard, MIT, McGill, and Berkeley.

RESEARCH

Harvard Cloud Networking and Systems Lab | Undergraduate Researcher — Feb '21 – Present

- Working under Professor Minlan Yu.
- Researching how to leverage RPC system queues to identify network performance issues such as noisy neighbor effects and head-of-line blocking.

PROJECTS

YouTube Party [Node.js, React, Socket.io, YouTube iFrame API]

A full stack web application that allows any number of users to stream YouTube videos synchronously using web sockets and a YouTube iFrame player.

ML-Enabled Spotify Curator [Flask, React, Celery, Redis, Scikit-Learn, Spotify Web API]

A full-stack web application that iterates over a set of inputted songs and calculates the probability that the user will like each song based on their Liked Songs library. Probabilities are calculated using k-means clustering, and Celery workers execute the training and prediction functions within a distributed task queue.

OCaml Interpreter [OCaml]

A set of metacircular interpreters for a Turing-complete subset of OCaml. Users can write OCaml on a graphical REPL, and each line is executed within three distinct semantic models: the substitution model, the dynamically-scoped environment model, and the lexically-scoped environment model.

RoommateHub [Swift, UIKit, MessageUI, Firebase]

An iOS application organizing the shared living experience for roommates. Features include secure user authentication, synchronized task lists, interactive roommate profiles, anonymized message boards, and embedded iMessaging.

TECHNICAL SKILLS

Programming Languages C · C++ · Java · Python · JavaScript · Swift · OCaml

Frameworks & Libraries React · Node.js · SwiftUI · UIKit

Tools & Technologies Airflow · ElasticSearch · Jenkins · Firebase · Figma

ACTIVITIES

Expressions Dance Company · USTA National-Level Tennis Player