

## Roan Yeh

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### Education

#### TUFTS UNIVERSITY

BS Degree in Computer Science with Music Engineering minor  
GPA: 3.77 | Tufts Deans List (Fall 2021 - Spring 2025)

Medford, MA

May, 2025

**Relevant Coursework:** Data Structures, Algorithms, Programming Languages, Web Programming, Database Systems, Intro to Security, Computation Theory, Linear Algebra, Digital Electronics, Electronics & Controls

### Experience

#### BUMBLE INC.

Remote from Los Angeles, CA

Engineering Intern on the AI Discovery team, Willem Zents 06/2024 – 08/2024

- Designed and implemented API backend infrastructure for machine learning model integration
- Optimized inference scripts through load testing, reducing latency and improving performance
- Deployed Dockerized services across dev and production environments for regional testing
- Trained and evaluated convolutional neural networks for recommendation tasks

#### UCLA INSTITUTE FOR CARBON MANAGEMENT

Los Angeles, CA

Research Intern for Sea Change Project, Dr. Gaurav Sant 06/2023 – 08/2023

- Prepared and analyzed pilot plant samples on PerkinElmer ICP-OES
- Calibrated and managed on-line alkalinity and hardness analyzers at pilot plant

#### UCLA INSTITUTE FOR CARBON MANAGEMENT

Los Angeles, CA

Research Intern for X/44 Project, Dr. Gaurav Sant 06/2022 – 08/2022

- Designed data processing scripts in Python to analyze CO<sub>2</sub> absorption and desorption rates for direct air capture cells
- Conducted experiment testing effect of pH gradient on efficiency of electrochemical direct air capture cell
- Gathered previous research on amine absorption rates based on amine type, concentration, and temperature to find optimal efficiency for CO<sub>2</sub> sequestration

### Projects

#### HANDDOWN – Backend Engineer

09/2024 – present

- Building a marketplace app for college students to reduce campus waste by incentivizing lending and borrowing
- Designing and managing backend architecture using **Supabase (SQL)**, **Firebase (NoSQL)**, and **FastAPI**, with integration into a **React Native** frontend

#### ARITH

02/2024 – 03/2024

- Implemented a compressor and decompressor in C to execute lossy image compression from a ppm file to a compressed binary file using a bitpacking interface

#### GREP

11/2022 – 12/2022

- Created implementation of grep with a partner to search for inputted word phrases in a directory tree containing text files
- Utilized `std::vector` and `std::functional` to create 2D hash in C++ to store mentions of every word in a given directory

### Skills & Interests

**Programming Languages:** Python, C++, C, SQL

**Tools & Technologies:** FastAPI, Docker, Firebase, PostgreSQL, Git/GitHub