Patrick Wong

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Education

University of California Irvine — Irvine, CA
Bachelor of Science in Computer Science: **Overall GPA**: *4.0* — *Sept. 2023 – Present*

- **Relevant Coursework**: Data Structures & Algorithms, Object-Oriented Programming, System Design, Human-Computer Interaction, Discrete Mathematics

Chabot College — Hayward, CA
Associates in Computer Science: **Overall GPA**: *3.93* — *Aug. 2021 – May 2023*

Technical Skills

Languages: TypeScript, JavaScript, C/C++, Python, Java, HTML/CSS
Frameworks: Next.js, React, Node.js, Chart.js
Technologies: VS Code, Visual Studio, Git, GitHub, GDB

Experience

Headstarter | *JavaScript, Python, Next.js, OpenAI API, Stripe API, Clerk (Auth)* — Aug. 2024 – Present
Software Engineer Fellow — Remote

- Built a full-stack web application using Next.js and OpenAI API allowing 100+ users specify ingredients and calories to generate meal suggestions
- Integrated the Clerk API for user **authentication** to securely save recipes to a collection through a **database**
- Implemented the Stripe API to facilitate donations, unlocking premium features for users to access their saved recipes

Cognixion | *JavaScript, Python, Flask, Urban Dictionary API, HTML, CSS* — Jul. 2021 – Aug. 2021
Software Engineer Intern — Remote

- Facilitated in the development of a full-stack web application using Flask, Jinja, Google Trends, and Urban Dictionary API to analyze slang **data** from user's uploaded text conversations
- Invented methods to pool together data in conjunction with Chart.js which allowed for data visualization through graphs for front-end development
- Developed a web application that resulted in **efficient** data collection for Cognixion's natural language processing technology among 50 employees
- Conducted surveys and logged 500+ slang words onto spreadsheets every week to train their AI to be highly accurate in identifying slang vocabulary

Projects

Searchly | *Python, Flask, HTML, CSS* — June. 2024 - July. 2024

- Developed a scalable **web crawler** capable of processing 50,000+ documents, with mechanisms to detect redirects, avoid infinite calendar pages, and bypass faulty link traps
- Engineered a search engine to index a corpus of 50,000 web pages under harsh operational constraints, achieving query response times under 300ms
- Optimized the inverted index generation algorithm, off loading memory for effcient document retrieval, and implemented a **relevance scoring** system to rank web pages based on query matches
- Integrated a Python backend for the web crawler and search engine with a Flask-powered frontend to display the top 10 ranked results user queries in a user-friendly interface

Picto-Sketch | *JavaScript, CSS, HTML* — Aug. 2023 – Sept. 2023

- Deployed a web application using React, JavaScript, HTML, and CSS to allow 35 users to create digital drawings
- Utilized DOM manipulation to dynamically modify the styling and positions of HTML elements on the user's interface for interactivity purposes
- Researched UI/UX usability principles to guide front-end development, and implemented the feature of consistency for the navigation bar and button components so users can focus on the application's tools