

Owen Chen

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EDUCATION

Dartmouth College

B.A., Computer Science

Hanover, NH

Expected June 2028

RESEARCH EXPERIENCE

DREAM Studio, Dartmouth College

Research Assistant

Hanover, NH

September 2024 – Present

- Contributed to 44,000,000,000 Moments of Joy under PI John Bell (2024 Arts Integration Grant, Hopkins Center for the Arts):
 - o Developed a cross-platform AR application in Unity using object detection and an LLM to generate Fluxus event scores (a type of artistic performance instruction) based on the objects present in user camera feeds.
 - o Implemented techniques for image pre-processing (padding, normalization, etc) and for post-processing of the YOLOv4 model output (anchor-based decoding of bounding boxes, sigmoid and exponential transformations, etc).
 - o Read various papers on object detection in order to select the most appropriate model for the project.
- Contributed to Deep Screens under Co-PIs John Bell and Mark Williams (2023 Public Knowledge Grant, The Andrew W. Mellon Foundation):
 - o Designed and implemented a node-based UI framework for VR applications in Unity capable of dynamically generating interface elements from data; developed the project's UI using this framework alongside server communication logic such as making HTTP requests and parsing responses.
 - o Expanded the functionality of 3D animation scripts to support the simultaneous animation of multiple models using data generated by the project's ML pipeline and implemented methods for reducing the appearance of visual artifacts in the final animation shown to the user.
 - o Scraped 10,000+ data points relating to various movies and actors, parsed them into a structured format, and wrote scripts to quickly and efficiently load them into the project's server using multithreading in Python.
 - o Assisted in designing an experiment for a study investigating the differences between people's interpretation of movies versus 3D animations generated from the poses of actors in those movies.

TEACHING EXPERIENCE

Department of Computer Science, Dartmouth College

Section Leader, COSC 31: Algorithms

Hanover, NH

June 2025 – Present

- Help students understand course material, complete homework, and prepare for exams during office hours; assist the professor in grading assignments and exams.

HONORS & AWARDS

Major League Hacking, HackDartmouth X Winner – Best Use of Gemini API	2025
National Merit Scholarship Corporation, National Merit Finalist	2024

PROFESSIONAL EXPERIENCE

HelloHost	Belmont, CA
<i>Software Engineering Intern</i>	February 2024 – August 2024
<ul style="list-style-type: none">• Analyzed user feedback and Jira tickets in order to implement various backend changes in Python, successfully resolving 22 tickets.• Redesigned the service's agentic workflow, reducing the amount of tokens in requests by ~25% and proportionally reducing OpenAI API costs and response times.• Developed a distance finding utility to estimate the distance between rental properties and nearby locations (restaurants, attractions, etc), eliminating reliance on external map APIs and reducing associated costs.• Identified and resolved major inaccuracies in the SQL querying process of the LLM, subsequently reducing the number of failed attempts ~95%.	

REFERENCES

References available upon request.