

Matthew Wong

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Work Experience

Founding Software Engineer | Rodium | Somerville, MA

June 2025 - Present

- Collaborated with experts to conceptualize and invent new B2B products to manage and integrate companies under the same group
- Developed an interface for a legal document signing application using React
- Planned and built the MongoDB database schema to maximize parallelization for users
- Designed an API which connected to a MongoDB database using Express.js and Node.js

AS Watsons AI Intern | CK Hutchingson Group | Hung Hom, Hong Kong

May 2024 - August 2024

- Created a ChatGPT-powered chat-bot for the marketing team which reduced campaign creation from 480-960 minutes to 5-10 minutes
- Designed and deployed a FastAPI using Azure functions for the chat-bot
- Extracted data from XML files and uploaded to a MongoDB database to transfer to a new system automatically, saving 100+ hours of work
- Automated giving the 1000+ entries of data a natural language description for vector search based on natural language input
- Constructed an automatic advertisement builder using Meta's SAM model to build personalized ads, customizing 100+ ads in under 1 second

Computational Theory Teaching Assistant | Tufts University | Medford, MA

September 2024 - May 2025

- Organized and lead recitations and study sessions to promote student growth
- Collaborated with students to foster individualized teaching environments for each person
- Approached the same problem at different angles to encourage students to develop personal critical thinking skills

Education

BS - Computer Science and Mathematics | Tufts University | Medford, MA

September 2021 - May 2025

Graduated Summa Cum Laude | GPA: 3.98/4.00

Courses: Artificial Intelligence, Machine Learning, Software Engineering, Concurrent Programming, Database Systems, Cybersecurity, Programming Languages, Computation Theory, Human-Computer Interaction, Computer Graphics, Data Structures, Algorithms, Machine Structure and Assembly, Game Design, Mathematical Modeling, Statistics

Projects

Stepping Stones

- Ported a physical board game to a digital space in Godot to improve the user experience, going from a rating of 5/10 to 9/10 in usability
- Constructed and ran an online Oracle server for multiplayer, allowing for play across different computers via RPC
- Tripled the amount of players and play testers at no cost by creating digital copy distribution online

Spellweaver

- Programmed a robust game system which allowed for personalized user customization with over 1000 options that worked together
- Collaborated in a team of 4 to develop a complete game in under 2 months
- Managed team members and communication to allow for integration while maintaining development speed

Dungeon Restocker Game

- Developed a videogame with a team of 5 in under 72 hours for a game jam
- Organized the project architecture and lead the team to effectively parallelize tasks
- Designed the combat systems which flexibly allowed for different combinations of attacks and enemies to interact with the unique player items

Multiplayer Pacman

- Constructed an online server hosted version of Pacman to allow for cross-computer gameplay using Python and Erlang
- Designed the system architecture to allow for flexible and resilient coordination between distributed systems
- Coded the gameplay and game logic of the system, allowing for 4+ players to play the same game simultaneously

Terrain Generation Algorithm

- Implemented a flexible terrain generation algorithm using Wave Function Collapse designed to be used in multiple projects
- Adapted the program to include a visualization of the program process for debugging and testing

Lossy Photo Compression

- Created a lossy compression program that reduced file size by 75% while maintaining above 90% accuracy
- Engineered a modular solution so that only 2 lines of code changed when requirement changes in the pipeline came in

Extracurricular

Jumbohack 2024

- Won 1st place in the "Environmental category" by building an educational game
- Built the project within 48 hours by working closely in a team of 6 people

MIT Hackathon 2023

- Conceptualized and developed a habit-tracking calendar in a team of 5 in Swift

Skills

Programming: C++, C, C#, Java, Python, JavaScript, Typescript, HTML, CSS, Bash, PostgreSQL, Erlang, HLSL, GLSL, LaTeX, Swift

Technical: GitHub, ChatGPT API, Meta SAM, Hugging Face, LangChain, PyTorch, TensorFlow, SciKit-learn, Pandas, Numpy, Pygame, Jupyter Notebook, FastAPI, Node.js, React, Express.js, Docker, Azure Functions, Figma, Unity, Godot, Photoshop, Krita

Business: Technical Documentation, Project Management, Game Design, Trello, Jira, Agile

Languages: English (Native), Mandarin