

Lance D. Wong

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Education

Columbia University | New York, NY

Bachelor of Science in Computer Science, Minor in Math, GPA 3.80

August 2020 – Present

Expected Graduation, May 2024

High School Dual Enrollment at Worcester Polytechnic Institute | Worcester, MA

Math and Biology coursework with 30 Credit Hours, GPA 4.00 unweighted

August 2019 – May 2020

AIME qualifier, Eagle Scout, ARML (5 years), MIT Massachusetts State Science Fair 4th Place Award

Experience

AbbVie | Worcester, MA

May 2021 – August 2022

Software Engineer Intern

- Developed and maintained 2 asynchronous React web apps using a TS frontend, Python/TS backend, PostgreSQL database, and AWS server. Projects aided researchers in analyzing germline mutation and have been used 250+ times
- Converted molecular dynamics Jupyter Notebook into web-app
- Optimized De novo assembly PyTorch script by updating algorithm and translating to C++, reducing runtime by ~50%
- Assisted in training and onboarding other interns

UMass Medical School | Worcester, MA

May 2019 – June 2020

Research Intern / Department of Immunology

- Investigated the immunological mechanisms in lupus and morphea under Dr. Jillian Richmond
- Contributed to experimental design, writing, and analysis published in peer-reviewed journals ([ResearchGate](https://www.researchgate.net))
- Authored 4 articles for UMass Medical School Lupus website ([UMMS Lupus Blog](https://ummslupus.org))

Projects

Manufacturing Standard Operating Procedure (SOP)

Summer 2022

- Collaborated with a team of 5 to develop an interactive VR simulation of an operating procedure to educate employees on how to operate certain machines (C#, Unity, Blender)
- Business case and grand winner of AbbVie Hackathon (HackVie)

Web Server

Fall 2021

- Built a web server from scratch using C and TCP/IP protocol
- Server was designed to accept requests and load static and dynamic web pages coded HTML
- Created the client web page (a lookup server designed to lookup messages in a database) alongside the server

Music Motions: Mobile Application to Enable the Disabled to Play Music

Winter 2019 – Spring 2020

- Collaborated with 2 other team members to develop a face-tracking piano app that allows the user to play, save, and export music files using Android Studio and OpenCV.
- Engineered and 3D-printed stand for tablet and battery pack

Skills

Programming: JavaScript/TypeScript (ReactJS, NodeJS), Python (Pandas, PyTorch, NumPy, Flask), C++, C, C#, SQL, Java, HTML, CSS, LaTeX, PostgreSQL, pgAdmin, MongoDB, Neo4j, Plotly, MIPS Assembly, Docker, GCC, JSON, OCaml, AWS

OS: macOS, Microsoft Windows, Linux, iOS

Hardware: Arduino, LTSpice, oscilloscope, multimeter, logic analyzer

Software: IntelliJ/VS code, Linux command line, Android Studio, SolidWorks, OpenCV, GitHub, Git, Unity, Adobe Premiere Pro

Communication: Agile/Scrum, Design proposals, technical reports, instruction manuals, presentations (large and small audiences)

Languages: English (native), Cantonese (conversational), Mandarin (conversational), French (beginner)

Relevant Coursework

Completed: Artificial Intelligence, CS Theory, Introduction to Databases, Advanced Programming, Fundamentals of Computer Systems, Computational Linear Algebra, Data Structures in Java, Introduction to Electrical Engineering

In Progress: Programming Languages and Translators, Natural Language Processing, Undergrad Projects in CS

Activities

Clubs: Columbia Competitive Programming Team (ICPC), Climbing, HKSSS, Application Development Initiative, Robotics

