# Lance D. Wong

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## Education

**Columbia University | New York, NY** *August 2020 – Present*
Bachelor of Science in Computer Science, Minor in Math, GPA 3.80 Expected Graduation, May 2024

**High School Dual Enrollment at Worcester Polytechnic Institute | Worcester, MA** *August 2019 – May 2020*
Math and Biology coursework with 30 Credit Hours, GPA 4.00 unweighted

## 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
**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)

## Experience

**Columbia Build Lab | New York, NY** *September 2022 – Present*
***Software Engineer / Aptitude Team***

- Collaborated in a team of 2 to build a Flask backend which utilizes Plaid, Equifax, and Searchbug APIs with a blockchain oracle to generate a smart contract between the applicant and land owner

**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, and PostgreSQL database. 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%
- Evaluated PACBIO data using NumPy and reported trends to scientists
- 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 for studies published in peer reviewed journal (ResearchGate)
- Authored 4 articles for UMass Medical School Lupus website (UMMS Lupus Blog)

## Projects

**Manufacturing Standard Operating Procedure (SOP)** *Summer 2022*

- Collaborated in a team of 5 to develop a VR simulation of a SOP using C# in Unity
- Business case and grand winner of AbbVie Hackathon (HackVie)

**Personal Website** *Summer 2022*

- Developed personal website using HTML and CSS

**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

## Relevant Coursework

**Completed:** Artificial Intelligence, CS Theory, Probability For Engineers, Ordinary Differential Equations, Introduction to Databases, Advanced Programming, Discrete Math, Fundamentals of Computer Systems, Computational Linear Algebra, Data Structures in Java, Introduction to Electrical Engineering, Multivariable Calculus, Biotechnology, Cell Biology, Human Biology
**In Progress:** Programming Languages and Translators, Natural Language Processing, Clean Object-Oriented Design