Luke Liang

(513) 255-2909 | **liangl5.prog@gmail.com** | **lukeliang.dev**

SUMMARY

Expertise in software engineering and ML applications. Research experience in ML and simulations with *four published papers* as an undergraduate. Proven success in software engineering via an internship at JPMorgan Chase by *modernizing internal tools* and *leading a hackathon-winning project*. Developed *strong leadership skills* through extracurriculars. Passionate about applying technical solutions to solve complex problems.

SKILLS

Advanced: Python, AI/ML, NumPy, TensorFlow, Network Science, Javascript
Intermediate: Numba, pandas, C++, ReactJS, Java, Linux, Git, HTML/CSS, MySQL, HPC, Docker, R, SAS

PROFESSIONAL EXPERIENCE

Teaching Assistant (ML & Algorithms) **Aug 2022 - Dec 2023**
Miami University *Oxford, OH*

- Led and published a final research project that evaluated the performance of several ML models and data compression techniques **(Python, ML)**.
- Tutored students in Python, data structures, algorithms, and ML.
- Provided feedback and graded exams, homeworks, quizzes, and projects for students.

Software Engineering Intern **Jun 2022 - Aug 2022**
JPMorgan Chase & Co *Chicago, IL*

- Converted existing AngularJS internal software to ReactJS with a full-time team. Deployed the updated framework that is used throughout the entire bank **(ReactJS, Jenkins)**.
- Won the Code for Good Hackathon 2022 with a web-based project to revamp a non-profit organization's website with a group of other interns **(Javascript, MySQL)**.
- Integrated legacy pages with new internally developed APIs and updated technical documents.

Undergraduate Researcher **Aug 2021 - September 2024**
Miami University *Oxford, OH*

- Published 4 papers focused on ML and network science *(1 first author, 3 co-author)* (Google Scholar). Two first author manuscripts involving web applications and simulation are under preparation.
- Created a self-contained web-based project via Docker that houses a simulation platform for researchers at the CDC to evaluate policy effectiveness on youth suicide prevention **(Python, Numba, Docker, HPC)**.
- Applied ML models (ranging from decision trees to convolutional neural networks) and several methods to augment input data to accurately (up to 90% in certain cases) differentiate between erroneous and correct simulation models **(Python, ML, TensorFlow, NumPy, pandas)**.
- Developed a simulation of HIV drug resistance and mutation to evaluate treatment plans **(Python, NumPy)**.
- Proposed a National Health Instituide suicide modeling grant.

EDUCATION

BS in Computer Science, BS in Data Science, Math Minor (GPA: 3.86) **Aug 2021 - May 2024**
Miami University *Oxford, OH*

- Astronaut Scholarship *(national)*, Choose Ohio First ML Scholarship, Summa Cum Laude, Honors College
- Received training at University of Tennessee (National Science Foundation sponsored) for ML and data science through the HPC at Oak Ridge national laboratory *(only student selected)*.

LEADERSHIP EXPERIENCE

Chapter President **May 2023 - May 2024**
Tau Beta Pi - The Engineering Honor Society *Oxford, OH*

- Established the chapter as an official club through student government to receive funding for recruitment, social, and service events.
- Increased membership and community engagement by over 70% after inactivity due to COVID.