

# Adam Simpson

1704 Hill Street, Ann Arbor, MI | adwisi@umich.edu | (+1) 817-832-9776

## EDUCATION

<b>University Of Michigan, Ann Arbor, Michigan</b> Bachelor of Science, Electrical Engineering and Computer Science	<b>2022 - 2025</b> 3.4 / 4.0
• Assistant GMC of the Kappa Sigma-Alpha Zeta chapter - leader of BIA, Michigan Data Science Team, Climbing Club • Notable Courses: Artificial Intelligence, Data Science for Machine Learning, Cyber Security, Operating Systems	

  

<b>Loyola Marymount University &amp; UCLA Extension Program, Los Angeles, CA</b> Bachelor of Arts, Film Production	<b>2020 - 2022</b> 3.9 / 4.0
• Deans list for four consecutive semesters, Presidents Merit Scholarship, LMU RHA senator, Surf Club VP for 2 semesters	

## PROFESSIONAL EXPERIENCE

### American Airlines, Hybrid

Data Science and Machine Learning Developer (Contract)	<i>January 2025 - Present</i>
• Built MLPClassifier to predict baggage arrival curve, honing predictions to save time and resources for American Airlines • Leveraged SQL via Snowflake for data extraction and EDA, finding patterns in flight data and scan time distributions • Addressed class imbalance and optimized generalization through clustering for prediction using SKLearn • Implemented random forest regressor to enhance classification accuracy across diverse statistical distributions • Collaborated with AA ML development leads to deploy models across major hubs including Phoenix and Dallas	

### Homestream, Ann Arbor, MI

Software Engineer	<i>July 2024 - March 2025</i>
• Developed MVP for AI real estate platform leveraging Machine Learning and Large Language Models in Python • Automated document generation, property analysis, and buyer support, with goal of saving buyers average of \$10,000 • Secured \$15,000 through competitions including Dare to Dream, Fuel Startup Grant, and Michigan Business Challenge	

### Ad-ventures, Ann Arbor, MI

Co-Founder	<i>June 2023 - March 2024</i>
• Pioneered a startup paying property owners to host digital displays, offering hyper-local marketing for local businesses • Developed and monitored a network of advertisement screens, securing the Lurie Institute Startup Grant • Recruited 10+ residential properties for advertisement hosting, expanding company's display network • Executed targeted marketing campaigns for local enterprises, increasing client brand awareness by up to 25%	

## PROJECTS AND ACHIEVEMENTS

WaitFast IOS	<i>January 2025 - Present</i>
• Mobile application in Swift and Python, integrating Google and Apple location APIs for accurate tracking • Managed SQL queries and dynamically updated JSON objects through AWS for data retrieval and real-time updates • Informed users decisions, providing local wait times through dynamically updated, crowd-sourced data	

### Pager Implementation

	<i>March 2025 - April 2025</i>
• Programmed a virtual memory pager in C++, managing page tables, physical memory, and per-process metadata • Implemented file and swap backed memory support, utilizing clock replacement for efficient and fair eviction	

### Custom Thread Library

	<i>January 2025 - March 2025</i>
• Built a custom thread library with preemptive scheduling, context switching, and synchronization primitives in C++ • Programmed deterministic/non-deterministic models of an OS, optimizing concurrency, performance, and memory	

### NASA Ames - Mycellium Research

	<i>October 2020 - April 2021</i>
• Research and data analysis on mycelium and its aerospace applications under supervision of NASA Ames mentors • Presented findings to a NASA Ames panel; research was later adopted and constructed into a practical project • Led team of 4 to recognition by California State Senate for significant contributions to NASA Hack into Space project	

## INTERESTS AND SKILLS

Proficient: C++, Python, Pandas, Numpy, SQL, Machine Learning - SKlearn and Pytorch, Natural Language Processing, ReGex, Bash, Cyber Security, Statistics, Linear Algebra, Multi Threaded Programming, SQL, Database Management	
Working knowledge: C, Assembly and Computer Architecture, CSS, HTML, R, Javascript, Swift	
Creative experiences: University of Michigan Chamber Music Jazz Ensemble, past work experience in film and video production	