

Adam Simpson

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EDUCATION

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- University Of Michigan, Ann Arbor, Michigan** **2022 - 2025**
Bachelor of Science, *Electrical Engineering and Computer Science* 3.4 / 4.0
 - Assistant GMC of the Kappa Sigma-Alfa Zeta chapter - leader of BIA, Michigan Data Science Team, Climbing Club
 - Notable Courses: Artificial Intelligence, Data Science for Machine Learning, Cyber Security, Operating Systems
- Loyola Marymount University & UCLA Extension Program, Los Angeles, CA** **2020 - 2022**
Bachelor of Arts, *Film Production* 3.9 / 4.0
 - Deans list for four consecutive semesters, Presidents Merit Scholarship, LMU RHA senator, Surf Club VP for 2 semesters

PROFESSIONAL EXPERIENCE

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- American Airlines, Hybrid**
Data Science and Machine Learning Developer (Contract) *January 2025 - Present*
 - 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 *July 2024 - March 2025*
 - 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 *June 2023 - March 2024*
 - 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

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- WaitFast IOS** *January 2025 - Present*
 - 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** *March 2025 - April 2025*
 - 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** *January 2025 - March 2025*
 - 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** *October 2020 - April 2021*
 - 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, Mutli 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