Farhan Sadeek

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EDUCATION

DUBLIN COFFMAN HS
High School Diploma
May 2025 | Dublin, OH
Cum. GPA: 4.56 / 4.0
AP Physics C: Mechanics
AP Physics C: Electricity & Magnetism
AP Calculus BC
AP Computer Science A
AP Chemistry
AP Macro/Microeconomics*

THE OHIO STATE UNIVERSITY
Dual Enrollment in High School
Math/Stat, Physics, CS, ECE
Aug 2025 | Columbus, OH
Cum. GPA: 3.826 / 4.0
Number Theory*
Real Analysis*
Abstract Algebra*
Mathematical Statistics*
Relativity / Quantum Mechanics*
Probability Theory
Classical Mechanics
Mathematical Logic and Proofs
Partial Differential Equations
Linear Algebra
Multi-variable Calculus
Discrete Mathematics
Data Structures
Object-Oriented Programming
Software Development and Design
Engineering Physics

STANFORD UNIVERSITY
Stanford, CA
Data Analysis with Python
Data Structures and Algorithms
Statistics and Machine Learning

* Current year courses

SKILLS

PROGRAMMING
Over 5000 lines:
Java • C++ • Python • Javascript
HTML • CSS • LaTeX
Over 1000 lines:
C • R • CSS • • MySQL

TOOLS & FRAMEWORKS
Tableau • Tidyverse • Tensorflow
React • PyTorch • Excel • Pandas
Plotly

AWARDS

2024
Ohio State Hackathon Winner
USA Computing Olympiad Gold
Gates Scholarship Semifinalist
2023
Ohio State Hackathon Winner
2022
AP Scholar with Distinction
Ohio State Hackathon Winner
2021
Bangaldesh Physics Olympiad Semifinalist
Bangaldesh Chemistry Olympiad Semifinalist

ACTIVITIES

Competitive Programming Club
Big Data and Analytics Association
Artificial Intelligence Club
Google Developer's Club

EXPERIENCE

THE OHIO STATE UNIVERSITY | Lead Machine Learning Engineer
Mar 2024 – Present | Columbus, OH

- Developed and maintained data pipelines to facilitate efficient ETL of large-scale datasets, ensuring high data quality and integrity.
- Collaborated with cross-functional teams to optimize database schemas and algorithms for effective storage and retrieval of time-sensitive data, and managed automated processes for data validation and cleansing.

EXPEDIA GROUP | Software Engineer
June 2024 - Present | Seattle, WA

- Developed machine learning models to analyze travel data and identify growth opportunities, leading to an **18%** increase in customer retention and a **22%** boost in booking accuracy.
- Streamlined competitor benchmarking by automating data aggregation processes, reducing analysis time by **40%** and improving actionable insights delivery by **30%**.
- Collaborated with engineering and product teams to integrate market intelligence into platform enhancements, resulting in a **25%** improvement in user experience scores and a **15%** reduction in customer churn.

SPECTRUM | Technical Solutions Engineer
June 2023 - April 2024 | Columbus, OH

- Advised over **200** clients monthly on network solutions, including VoIP, MPLS, and SIP technologies, contributing to a **12%** increase in long-term contract renewals and a **20%** reduction in support tickets.
- Designed and presented technical proposals tailored to client needs, achieving a **25%** rise in sales conversions and a **30%** increase in customer engagement metrics.
- Trained sales teams on advanced technical features, leading to a **15%** improvement in team productivity and boosting client satisfaction scores by **18%**.

RENAISSANCETECH | Software Engineer
May 2024 - Aug 2024 | Dublin, OH

- Developed and maintained dynamic, high-performance web applications using React, achieving a **30%** increase in user engagement, a **25%** reduction in page load times, and a **40%** increase in feature adoption within 6 months.
- Implemented 15 reusable components and optimized front-end architecture, reducing development time by **20%** and boosting user satisfaction scores by **15%** through improved UI/UX.

NETSTEADY | Automation Programmer
May 2024 - Aug 2024 | Hilliard, OH

- Designed and implemented automated testing frameworks and scripts, achieving a **35%** reduction in manual testing efforts and a **20%** increase in bug detection rates, alongside a **30%** decrease in system outages due to proactive monitoring.
- Created custom automation solutions for data processing and system integration, increasing operational efficiency by **40%**, reducing system downtime by **15%**, and leading to a **20%** improvement in team productivity through comprehensive documentation and training.

PROJECTS

CRISISCOMPASS
- Developed a disaster assessment tool using YOLO object detection models to analyze satellite imagery, achieving **92%** accuracy in identifying flood damage and compromised structures.
- Optimized cloud deployment workflows on AWS, reducing model training time by **40%** and enabling real-time predictions.
- Designed an intuitive dashboard to visualize disaster impact data, providing first responders with actionable insights for time-critical decisions.

VISIONSCOPE
- Developed a real-time video processing system using an Arduino microcontroller and infrared sensors, enabling face detection through optimized cascade classifiers.
- Achieved efficient machine learning inference by optimizing computational workflows, balancing algorithmic complexity with the limitations of embedded systems.
- Enhanced understanding of embedded AI by exploring the intersection of systems programming and statistical learning.

UNIMIND
- Designed and developed a React-based application with ChainLit integration, centralizing access to multiple leading LLMs in one platform.
- Built an intuitive and responsive interface for diverse applications, including content generation, code assistance, and data analysis.
- Engineered a robust backend to manage API connections, ensuring optimized performance and scalability across models.

RESEARCH

- Investigated the impact of natural disasters on individuals with diverse identities under the guidance of Dr. Kelsea Best, analyzing patterns in disaster response and resilience.
- Utilized Python (Pandas, Matplotlib) and R (Tidyverse, ggplot2) for data preprocessing, visualization, and statistical analysis, delivering comprehensive insights and reports to aid ongoing research.