

Dallin Stewart

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EDUCATION

M.S. Computer Science - 4.00 GPA	August 2026
<i>Georgia Institute of Technology</i> - Interactive Intelligence Specialization	
B.S. Applied and Computational Mathematics - 3.99/4.00 GPA	April 2024
<i>Brigham Young University</i>	

- Computer Science Minor, Data Science and AI/ML Emphasis, Math Department Dean's List
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SKILLS

Python, C++, Java, SQL, OpenCV, Rest API, PyTorch, Git, Pandas, Selenium, Data Analytics, Bayesian Statistics, SLAM, XGBoost, Kalman Filters, Genetic Algorithms, PID Control, Agile, Jira, Spanish

EXPERIENCE

Autonomy R&D Intern — Sandia National Laboratories	June 2025 - Present
• Enhanced erroneous input rejection by 100% for image classifiers with a versatile Mahalanobis algorithm	
Quantitative Researcher — Union Capital Partners	July 2024 - June 2025
• Built XGBoost models with genetic optimization to forecast trends and select profitable short-term trades	
• Automated 100% of trade execution using IBKR API and OOP with visual insights and custom tkinter GUI	
Software Engineering Intern — Ericsson	June 2023 - August 2023
• Promoted communication with an Agile project request form in Python using rest API and custom UI	
• Simplified intake and reduced waste with an Ignition CV app that robustly read and sorted product labels	
Data Analyst Intern — Wells Fargo	June 2022 - August 2022
• Optimized speed and accuracy of emission estimates by 20% with noisy entity-matching algorithm analysis	
Research Assistant — Brigham Young University	January 2022 - April 2024
• Ran 100,000 MCMC simulations to solve an inverse tsunami problem with uncertain data and empirical priors	
Software Engineering Lead — BYU Formula E Racing Team	August 2022 - June 2024
• Led software dev for the ECU and sensor array in BYU's Formula SAE electric race car; developed a C++ OOP architecture with Jira and Git, and visualized data with Plotly to improve engineering designs	
Program Director — Life Help Arizona	July 2020 - May 2021
• Executed a \$30,000 marketing strategy with a custom CMS and KPI dashboard to refer 50+ leads every day	
• Founded and directed a volunteer English teaching program in 7 cities with hundreds of students in one year	

PROGRAMMING PROJECTS

Origami-inspired AI	(Python)	Researched a novel deep neural network layer inspired by origami	2025
Formula E Vehicle ECU	(C++)	Built an Arduino based data visualization and ECU program for Formula E	2024
Celebrity Look-alike	(Python)	An award-winning facial recognition algorithm in the ACM hackathon	2023
Color Correction AI	(Python)	Trained a GAN deep learning architecture to color grayscale images	2023
Mini ChatGPT	(Python)	Improved karpathy's minimal PyTorch re-implementation of ChatGPT	2023
Car Purchase Automation	(Python)	Scraped car sales for market research and detected damage with AI	2023
Family Map Android App	(Java)	An Android app and server to view family history with SQL and APIs	2022

Other Projects

AR Transcriptor	(Python 51) Automatically detect and transcribe live speech with FFT and CNNs	2023
JARVIS	(Python 90) Virtual assistant that speaks, listens, and automates computer tasks	2023
Portfolio Website	(HTML 100) My own coding portfolio and math blog using a website template	2023
<u>Final Projects</u>		
EV Adoption	(Python 12) Predict electric vehicle adoption in the US with SIR modeling	2024
Drive Time Prediction	(Python 16) Estimate NYC taxi trip duration with Random Forests	2023
PVS Road Detection	(Python 39) Determine road type/quality with Kalman filters and HMMs	2024
Datalog Compiler	(C++ 60) Optimized custom parser and compiler to run datalog programs	2021
GNN Causal Learning	(Python 20) Causal inference on lung cancer with graph neural networks	2024
<u>CS 474 Labs</u>		
Cancer Detection	(Python) Detect cancerous cells with convolution U-net deep architecture	2023
DL Translator	(Python) Translate between english and spanish with deep learning	2023
Image Style Transfer	(Python) Apply the style of one image to the content of another image	2023
<u>ACME Labs</u>		
Wordle Solver	(Python) Optimally solve wordle challenges in 4 moves with information theory	2023
Handwritten Digits	(Python) Recognize hand-written digits with a k nearest neighbors algorithm	2022
Yoda Generator	(Python) Generate yoda-like sentences with a markov model	2022
Movie Recommender	(Python) Recommend movies with non-negative matrix factorization	2023
Steps to Kevin Bacon	(Python) Count the steps between any actor and Kevin Bacon with BFS	2022
Google's PageRank	(Python) Rank search results the same way Google used to	2022
Diet Optimization	(Python) Optimize your nutrition with a convex optimization algorithm	2023
Obstacle Avoidance	(Python) Perform optimal path planning around obstacles with PDEs	2024
<u>OMSCS Labs</u>		
Fall 2024		
Knight Isolation	(Python 12) AI to play knight isolation with alpha-beta depth-first search	2024
Map Navigation	(Python 12) Plan the optimal path between 3 cities with the A-star algorithm	2024
RF from Scratch	(Python 8) Implement the random forest machine learning algorithm from scratch	2024
PID Drone Control	(Python 7) Navigate a drone along optimal paths using PID control	2024
Solar Navigation	(Python 18) Find a satellite in the solar system using particle filters and gravity	2024
Asteroid Hopscotch	(Python 25) Navigate through asteroid field with Kalman filter predictions	2024
Path Planning	(Python 24) Robustly navigated a warehouse despite obstacles and uncertainty	2024
SLAM Drone Control	(Python 14) Navigation and mapping drone environment to reach goal	2024
<u>Winter 2025</u>		
RL Stock Trader	(Python 16) Bot that uses Q-learning to predict optimal buy/sell times of a stock	2025
Market Simulator	(Python 6) Simulate buys/sells with slippage, market impact commission, etc	2025
Job Comparison	(Java 22) Work with a group to build an Android app to compare job offers	2025
<u>Fall 2025</u>		
ARC AGI Agent	(Python 100) knowledge based AI agent that performs visual reasoning	2025