

# Dallin Stewart

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## EDUCATION

**M.S. Computer Science - 4.00 GPA** August 2026  
*Georgia Institute of Technology* - Interactive Intelligence Specialization

**B.S. Applied and Computational Mathematics - 3.99/4.00 GPA** April 2024  
*Brigham Young University*  
➤ Computer Science Minor, Data Science and AI/ML Emphasis, Math Department Dean's List

## 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

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

## Other Projects

<b>AR Transcripтор</b>	(Python 51) Automatically detect and transcribe live speech with FFT and CNNs	<b>2023</b>
<b>JARVIS</b>	(Python 90) Virtual assistant that speaks, listens, and automates computer tasks	<b>2023</b>
<b>Portfolio Website</b>	(HTML 100) My own coding portfolio and math blog using a website template	<b>2023</b>

## Final Projects

<b>EV Adoption</b>	(Python 12) Predict electric vehicle adoption in the US with SIR modeling	<b>2024</b>
<b>Drive Time Prediction</b>	(Python 16) Estimate NYC taxi trip duration with Random Forests	<b>2023</b>
<b>PVS Road Detection</b>	(Python 39) Determine road type/quality with Kalman filters and HMMs	<b>2024</b>
<b>Datalog Compiler</b>	(C++ 60) Optimized custom parser and compiler to run datalog programs	<b>2021</b>
<b>GNN Causal Learning</b>	(Python 20) Causal inference on lung cancer with graph neural networks	<b>2024</b>

## CS 474 Labs

<b>Cancer Detection</b>	(Python) Detect cancerous cells with convolution U-net deep architecture	<b>2023</b>
<b>DL Translator</b>	(Python) Translate between english and spanish with deep learning	<b>2023</b>
<b>Image Style Transfer</b>	(Python) Apply the style of one image to the content of another image	<b>2023</b>

## ACME Labs

<b>Wordle Solver</b>	(Python) Optimally solve wordle challenges in 4 moves with information theory	<b>2023</b>
<b>Handwritten Digits</b>	(Python) Recognize hand-written digits with a k nearest neighbors algorithm	<b>2022</b>
<b>Yoda Generator</b>	(Python) Generate yoda-like sentences with a markov model	<b>2022</b>
<b>Movie Recommender</b>	(Python) Recommend movies with non-negative matrix factorization	<b>2023</b>
<b>Steps to Kevin Bacon</b>	(Python) Count the steps between any actor and Kevin Bacon with BFS	<b>2022</b>
<b>Google's PageRank</b>	(Python) Rank search results the same way Google used to	<b>2022</b>
<b>Diet Optimization</b>	(Python) Optimize your nutrition with a convex optimization algorithm	<b>2023</b>
<b>Obstacle Avoidance</b>	(Python) Perform optimal path planning around obstacles with PDEs	<b>2024</b>

## OMSCS Labs

### Fall 2024

<b>Knight Isolation</b>	(Python 12) AI to play knight isolation with alpha-beta depth-first search	<b>2024</b>
<b>Map Navigation</b>	(Python 12) Plan the optimal path between 3 cities with the A-star algorithm	<b>2024</b>
<b>RF from Scratch</b>	(Python 8) Implement the random forest machine learning algorithm from scratch	<b>2024</b>
<b>PID Drone Control</b>	(Python 7) Navigate a drone along optimal paths using PID control	<b>2024</b>
<b>Solar Navigation</b>	(Python 18) Find a satellite in the solar system using particle filters and gravity	<b>2024</b>
<b>Asteroid Hopscotch</b>	(Python 25) Navigate through asteroid field with Kalman filter predictions	<b>2024</b>
<b>Path Planning</b>	(Python 24) Robustly navigated a warehouse despite obstacles and uncertainty	<b>2024</b>
<b>SLAM Drone Control</b>	(Python 14) Navigation and mapping drone environment to reach goal	<b>2024</b>

### Winter 2025

<b>RL Stock Trader</b>	(Python 16) Bot that uses Q-learning to predict optimal buy/sell times of a stock	<b>2025</b>
<b>Market Simulator</b>	(Python 6) Simulate buys/sells with slippage, market impact commission, etc	<b>2025</b>
<b>Job Comparison</b>	(Java 22) Work with a group to build an Android app to compare job offers	<b>2025</b>

### Fall 2025

<b>ARC AGI Agent</b>	(Python 100) knowledge based AI agent that performs visual reasoning	<b>2025</b>
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