Kyle McCandless

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EDUCATION

California Institute of Technology   Class of 2024
- **Double major**: Computer Science **and** Business. **Minor:** Data Science   **4.3 / 4.3 GPA**
- **Henry Ford Scholarship:** Highest GPA in the class of 2024 CS major
- **Areas of Focus:** Computer Science, Applied Math, Quantitative Finance, Autonomous Robotics, Business

EXPERIENCE

Data Science Analyst – Blackstone   July 2024 – Current
- **Leverage** statistical analysis & machine learning to drive diligence conviction in deals worth $1B+
- **Create** proprietary generative AI applications to automate and enhance the private investment process
- **Skills:** Python, SQL, LLMs, Retrieval Augmented Generation (RAG), Machine Learning & AI, Snowflake

Quantitative Development Intern – Akuna Capital   June – Sept 2023
- **Parsed 42 TiB of raw market data** and refactored into two daily-updating, production tier data tables
- **Increased expected algorithmic profit by 39.6%** by designing and training two machine learning models
- **Skills:** Python, LightGBM, DDM (PySpark, Databricks, ETL), Option Pricing, Statistics, Econometrics

Software Engineering Intern – Niantic   June – Sept 2022
- **Enabled users to take a video, add artificial reality content in Unity,** and have it aligned to the real world
- **Exceeded** project scope to deploy into production front end, spanning four Git repositories
- **Skills:** C++, Golang, Git, CI/CD, Pytest, Linear Algebra, Protocol Buffers

Software Engineering Intern – XP Health   Mar – Sept 2021
- **Improved company-wide purchase tracker load time by 52%** by optimizing database queries
- **Collaborated** with operations team to build a live search page of FAQs that **stayed in use for 2.5 years**
- **Awarded** mid-internship salary raise and developed skills in Git, JavaScript, React, Bootstrap, HTML/CSS

PROJECTS

A Signal Processing Approach to Scoliosis   Dec 2022 – Current
- **Classified** mild, medium & extreme scoliosis with 92% ROC AUC Score using Random Forest & ResNet
- **Extracted** spinal curve using computer vision, scikit-learn, and pytorch then derived mathematical features
- **Accepted** into the 2025 AANS/CNS Spine Summit Annual Meeting as an e-poster

OActive Health Study App   June 2024 – Current
- **Developed** iOS app for health study data collection that is live on the App Store
- **Designed** secure, anonymized access flow using Swift, AWS Lambda, Amplify, GraphQL and DynamoDB

Probabilistic Roadmap Algorithms (PRMs) for Robotic Planning   Feb – June 2023
- **Developed** four new lazy PRM algorithms that **reduce compute time by 49%** in dynamic environments
- **Built** car-like navigational robots that use temporal planning & pseudo-SLAM from scratch using ROS (video)

Deep Learning Chest X-Ray Diagnosis   Mar – June 2022
- **Achieved** 92% accuracy at diagnosing 14 different medical conditions and placed top 5 in Caltech class
- **Trained** Convolutional Neural Networks (CNNs) on an unprocessed dataset of 200K chest X-Rays using Pytorch

EXTRACURRICULAR

- **Citadel Terminal Champion:** Won $6K 1st prize for building a strategic AI to play a chess-like virtual game
- **NCAA Athletics:** Caltech Scholar-Athlete of the year. Academic All-American. Led men's tennis to #13 D3 national ranking as captain and #1 player. #3 runner on Men's XC at best regional championship in history
- **ACEing Autism Pasadena:** 2-year director of a 120-member initiative to teach tennis to kids with Autism