

Jonathan Buhler

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Education

(2017 - 2021)
University of Edinburgh
BSc in CS and AI

(2013 - 2017)
Stuyvesant High School

Hons. Grades (3rd Year)

Introductory Machine Learning: **A-**
Foundations of Natural Language
Programming: **A-**
Computer Security: **A+**
Informatics Large Practical: **A**
Operating Systems: **A**
System Design Project (group): **B**

Exam Scores

SAT: 1540 (out of 1600)
AP Exams (≈ A Levels):
• Calculus BC: 5 (out of 5)
• Computer Science: 5
• English Language: 5
• US History: 5
• European History: 5

Technical Skills

Languages:	Platforms:
• Python	• TensorFlow
• JavaScript	• scikit-learn
• TypeScript	• OpenCV
• Swift	• SwiftUI
• Java	• ROS
• C++	• Node.js

Interests

- Hillwalking
- Photography
- Model United Nations
- Graphic Design

Profile

Fourth-year student at The University of Edinburgh studying Computer Science and Artificial Intelligence. Born in Scotland and raised in New York City, fluent in English and German with US, UK, and German citizenship.

Projects and Relevant Coursework

Honors Project (2020 - Current)

- Researching how to reproduce human-like behavior in game theory with autonomous agents
- Aim is to replicate human emotions (trust, fairness, etc.) that cause human strategies to deviate from the Nash equilibrium of a game
- Extensive use of reinforcement learning with Python and TensorFlow
- Designing OpenAI Gym-like environment for agents to interact and learn

System Design Project (2019)

- Built robot on TurtleBot platform that was capable of accurately returning to station from anywhere in the room, aligning itself, and docking
- Coded in Python and C++ using R.O.S and OpenCV
- Successfully managed team of 8 students

Formula Student AI Division (2019)

- Worked on the Planning & Control Team designing a self-driving race car
- Researched and implemented intelligent algorithms for yearly competitions

Hack The Burgh - Hackathon (2019)

- Using TensorFlow and OpenCV, built a smoking detection bot
- Team won the ARM challenge

SpaceX HyperLoop Competition (2019)

- Worked on telemetry for high-velocity pod in yearly SpaceX competitions
- Coded pod communication and front-end display in JavaScript
- Built framework for a modular system-status dashboard

Cryptocurrency Trading Bot (2020)

- Built autonomous trading bot that would scrape price predictions from the web using Puppeteer, then rebalance portfolio using the CCXT library
- Coded in TypeScript, hosted on Raspberry Pi, and run with TS-Node

Tesco Delivery Slot Detector (2020)

- Built web scraper to monitor Tesco's site for availability, would alert user when slots open up
- Made during pandemic for my grandparents, focused on ease of use and reliability

Google Hash Code (2019)

- Top of Edinburgh in extended round (239 / 3000 worldwide)

Personal Website (2020)

- Built with TypeScript, deployed by Vercel

Work Experience

Consensys (2018)

- Interned as a software engineer for the Pegasys R&D division
- Worked on EthQL, a GraphQL interface to Ethereum, coded in TypeScript
- Learnt about working in an AGILE team as well as working remotely with team members
- Received commendations for inventive problem solving, quick learning, and work ethic