

# Cyrus Singer

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## EDUCATION

### University of Pennsylvania

*Bachelor of Science in Computer Science*

May 2026

*Current GPA: 3.53/4.0*

**Relevant Courses:** Networks and Security, Engineering Probability, (graduate level) Internet and Web Systems

### University College School (UK)

July 2023

**A Levels:** *Physics(AQA) A\*, Economics(EDEXCEL) A, Mathematics(OCR) A\*, Further Mathematics(OCR) A*

**GCSE/IGCSE (all 9s):** Mathematics, English Literature, English Language, Spanish, Chemistry, Biology, Computer Science, Physics, Geography, Drama

## SKILLS

**Languages:** JavaScript/TypeScript, Java, Kotlin, Python, C/C++/C#, HTML/CSS, L<sup>A</sup>T<sub>E</sub>X, Bash, Lua, Haskell, x86

**Tools:** GCP(Functions, Metrics, Cloud Run, IAM, Cloud Storage, Load Balancer), AWS(EC2, S3, Sagemaker, IAM), Firebase, Docker, Git, Tailwind CSS, Unix Shell, GDB

**Frameworks:** React, Node.js, Express.js, JUnit, Jest

**Libraries:** Tensorflow, pandas, NumPy, Matplotlib

**ML Structures:** Multilayered Perceptron, CNN, (bi)RNN, (bi)LSTM, GAN, AdaIN(style transfer), RNN

## WORK EXPERIENCE

### Technical Lead on Bizzybots platform | Wharton OI<sup>D</sup> Lab

2022 - Present

- I lead development of an LLM-powered chatbot platform used for negotiation research and education
- The development team is 5 people. I manage the development schedule, ensure product quality, and direct system design
- I also do full-stack, security, and devops development tasks.

*Reference available upon request*

### Intern | Olivetree Financial Ltd

Summer 2019

Project: Developed web scraping tools for the financial research team

Fundamental Analysis: Conceived, researched, presented a long-short investment proposal (Advanced Micro Devices)

Other tasks: Assisted head research analyst; aided chief compliance officer by making graphics

## PERSONAL PROJECTS

### RL Experiment | Java, Python, Tensorflow, Deep Q Learning | [source code](#)

2020

- Developed a java physics agent to simulate an agent in a 2d environment
- Built a training data pipeline to a python tensorflow program to train an agent to complete an obstacle course
- Used double deep Q learning to train an agent and optimized the agent's performance

### Tensorflow 2 ML Package | Python, Tensorflow | [package source](#), [usage](#)

2022

- Developed and documented a python package to simplify the process of creating and training ML models
- Added tools for automated training pipelines using callbacks for control
- Used the tools to train a CNN to classify images of flowers

### Brittle Object Simulation | Python, GPU optimization | [source code](#),

2022

- Program simulated the internal stresses of brittle lattices under forces and collisions
- Used a gradient decent method to resolve internal stresses

### Weather Balloon Operating Code & Circuits

*Python, Embedded Systems, Serial, USB, PWM, I<sup>2</sup>C* | [source code](#)

Launched in 2019

- Software took measurements from onboard sensors, stored and transmitted the compressed data via a satellite link
- Built for hardware and software redundancy
- Worked with a partner who handled power and ballast, and lift systems of the balloon
- Received the CREST Gold award for the project