Cyrus Singer

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Education

University of Pennsylvania May 2026
Bachelor of Science in Computer Science *Current GPA: 3.64/4.0*

Relevant Courses: Linear Algebra and Optimisation (graduate level), Internet And Web Systems (graduate level)

University College School (UK) July 2023
A Levels: *Physics (grade A*), Economics (A), Mathematics (A*), Further Mathematics (A)*
GCSE/IGCSE (grades all 9/9): 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, LaTeX, Unix Shell, Lua, Haskell, x86, RISC-V
Software Tools: Matlab, GCP(Functions, Metrics, Cloud Run, IAM, Cloud Storage, Load Balancer, Cloud Logging), AWS(EC2, S3, Sagemaker, IAM), Firebase, Docker, Git, Tailwind CSS, Unix Shell, GDB, Selenium

Other tools: Solidworks, PrusaSlicer, Onshape, SystemVerilog
Frameworks: React, Node.js, Express.js, JUnit, Jest
Libraries: Pytorch, Tensorflow, pandas, NumPy, Matplotlib

Work Experience

Technical Lead on Bizzybots Platform | *Wharton Behavioral Lab* 2022 - Present

- I am leading development of an LLM-powered chatbot platform used for negotiation research and education
- I manage the five-member development team, set the development schedule, ensure product quality and direct system design
- I personally handle many full-stack, security, and DevOps tasks

Reference available upon request

Teaching Assistant for Internet and Web Systems (graduate level) | *University of Pennsylvania* 2024 - Present

- Through Office Hours and an online forum, I help students debug their code and understand the course material
- I mentor two groups through the final project, building a distributed search engine

Personal Projects

Weather Balloon Operating Code & Circuits
Python, Embedded Systems, Serial, USB, PWM, I^2C Launched in 2019

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

Brittle Object Simulation | *Python, GPU optimization* | source code, 2022

- Developed program that simulated the internal stresses of brittle lattices under forces and collisions
- Used a gradient descent method to resolve bond stresses
- Optimized the program to run on a GPU

RL Experiment | *Java, Python, Tensorflow, Deep Q Learning* | source code 2020

- Developed a Java physics environment in 2d to simulate agents
- Tested multiple ML techniques on the agents, such as double deep Q learning
- Built a training data pipeline to help train agents to complete a 2d obstacle course