

Zachary Weachter

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EDUCATION

Brown University, M.S. Computer Science (GPA: 3.7) **2023 – 2024**

- **Coursework:** Graphics, Artificial Intelligence, Data Science, Natural Language Processing (NLP), Real-Time Embedded Software

Brown University, B.S. Cognitive Neuroscience, Computer Science (GPA: 3.75) **2019 – 2023**

- **Coursework:** Software Engineering, User Interfaces/User Experience Design, Computer Systems, Algorithms and Data Structures, Discrete Structures and Probability, Linear Algebra, Visualizing Information, Abnormal Psychology, Social Psychology

Haddon Township High School, Valedictorian (GPA: 4.41) **2015 – 2019**

EXPERIENCE

Freelance AI Prompt Engineer, Data Annotation **January 2025 – Present**

- Evaluated and fact-checked AI-generated code to ensure accuracy, safety standards, and adherence to coding best practices
- Conducted detailed code reviews, providing structured feedback to improve AI-generated solutions and enhance reliability
- Managed remote, self-directed freelance work, requiring time management and quickly adapting to new tools and frameworks

Head Teaching Assistant, Brown University **August 2021 – May 2024**

- Real-Time and Embedded Software (CSCI1600), Computing Foundations: Data (CSCI0111), Statistical Methods (CLPS0900)
- Provided 1-on-1 support both in office hours and asynchronously to help students with conceptual content and debugging
- Taught weekly 20-student lab section, teaching concepts and coaching students through lab exercises
- Assisted in course development, including creating project handouts, solution code, assets, and stencil code for students

Software Engineering Intern, Coursera **May 2023 – September 2023**

- Worked on Coursera Labs, which allows students to use Jupyter Notebook, RStudio, VS Code, Linux VM, or any custom application natively in the Coursera web application
- Created and designed new APIs using Docker and AWS, making labs more accessible and usable for technical course designers
- Migrated 200+ lines of the codebase and API endpoints from Scala to Java in ongoing, company-wide effort

Software Engineering Intern, Summit Partners **June 2022 – August 2022**

- Worked on team of 2 to generate quantitative problem-statement report on associate input patterns by searching a 1mil+ company interaction database using SQL, identifying generalizable input patterns for 80% of tagged cases
- Freed up 20,000+ financial data for use in AI analysis by developing a full-stack program to extract and store financials from associate notes (raw text input), including building a verification UI for associates using Python and Ruby on Rails
- Used Amazon Web Services to build an internal API using SNS and SQS to publish real-time communications between frontend services and backend lambda functions using the serverless framework

PROJECTS

Concentration Check, Software Engineering

- Built a web application that allows students to provide their courses taken and receive recommendations for concentrations (majors and minors) based on their course list, and also planning and populating requirements
- Built internal API to make application extensible to any school (not Brown exclusive). Designed the user interface for the administrative portal and backend database management system for storing pre-existing and new concentrations

Tron, Artificial Intelligence

- Built an Artificial Intelligence bot to solve the game Tron, a two-player, fast-paced game that involves searching a mathematical-graph-based grid to cut off the other player's movable tiles
- Peaked 5th place in a 175-student tournament. Used an alpha-beta search algorithm (using time and moves as cutoffs), an A* search with an iterative breadth-first heuristic that generates Voronoi diagrams to find the optimal path to win

Database, Computer Systems

- Implemented thread-safe connections between a client program and a database server running on a Linux operating system. Used coarse-grained and fine-grained mutex locking to handle multithreaded queries, additions, and deletions

SKILLS & INTERESTS

Languages: Python, Java, React, C, C++, JavaScript/TypeScript, Rust, Scala, R, SQL, Bash, HTML/CSS, LaTeX

Technical: OOP/programming, Amazon Web Services (AWS), Figma, Pytorch, Tensorflow, NumPy, OpenGL, Scikit-learn

Engineering: GitHub, REST APIs, UI/UX Design, Usability Testing, QA, JIRA, Confluence, W3C Accessibility, Datadog, Docker, Postman

Non-technical: theatre, music, baking, teaching, mental health, neurodiversity