

Zachary Weachter

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EDUCATION

Haddon Township High School (GPA: 4.41)

2015 – 2019

- Valedictorian, AP Scholar with Distinction, HTHS Honors Society, Founder and President of Drama Club

Brown University, B.S. Cognitive Neuroscience, Computer Science (GPA: 3.75)

2019 – 2023

- **Relevant Coursework:** Software Engineering, Artificial Intelligence, Computer Systems, User Interfaces/User Experience Design, Real-Time and Embedded Software, Digital Computing Systems, Algorithms and Data Structures, Object-Oriented Programming, Discrete Structures and Probability, Linear Algebra, Visualizing Information, Abnormal Psych, Social Psych
- **Activities:** Head Web Developer (Brown Theatre Collective), Meiklejohn Peer Advisor, Teaching Assistant (Statistical Methods), Technology Instructor & IT Intern (Lavner Camps and Programs), Editor (The Critical Review)

EXPERIENCE

Software Engineering Intern, Summit Partners

June 2022 – August 2022

- Collaborated with the Software Product Team to improve Summit's internal software platform, "A5"
- 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

Teaching Assistant, Computing Foundations: Data

August 2021 – Present

- Provided 1-on-1 support both in office hours and asynchronously to help students with conceptual content and debugging for data analysis/data structures course taught primarily in Python and Pyret (pyret.org)
- Taught weekly 20-student lab section, teaching concepts and coaching students through lab exercises
- Served on "projects team," creating project handouts, solution code, resources/assets, and stencil code for students

Research Intern, Beyond BookSmart

June 2020 – August 2020

- Led a team of 7 interns conducting research on qualitative experiences of students with ADHD on college campuses to improve company's executive function coaching program
- Conducted 15+ interviews with students and professionals and reviewed 10+ academic psychology journals with rest of team, consolidating research findings into 14-page whitepaper on executive function disorders in university settings

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. Also allows for planning and populating requirements
- Built internal API connecting frontend web application and the backend development in Java to make application extensible to a generic major at 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
- Placed 5th 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. Used coarse-grained and fine-grained mutex locking to handle multithreaded queries, additions, and deletions

SKILLS & INTERESTS

Computer: Java, Python, C, R, React, JavaScript/TypeScript, Scala, Ruby on Rails, SQL, x86 & ARM Assembly, HTML, CSS, LaTeX

Other Technical: Object-Oriented Programming, Amazon Web Services (AWS), W3C Accessibility

Interests: theatre, music, teaching, mental health, neurodiversity