

KAYLA E. SIMPSON

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EDUCATION

University of Pennsylvania, School of Engineering and Applied Science | Philadelphia, PA

Expected May 2026

Candidate for Bachelor of Science in Engineering (Major: Computer Science, Minors: Cognitive Science, Linguistics)

TECHNICALSKILLS

Java, Python, OCaml, C, JavaScript, React, Node.js, HTML, CSS, PostgreSQL, MongoDB, Neo4j, Linux, Shell, Git, Assembly, LaTeX

RELEVANT COURSEWORK

Computer Science: Operating Systems, Compilers & Interpreters, UI/UX Design, Database and Info. Systems, Artificial Intelligence, Data Structures & Algorithms, Computer Systems, Human Computer Interaction, Programming Languages & Techniques, Automata, Computability, & Complexity.

Cognitive Science: Cognitive Science, Cognitive Neuroscience, Experimental Psychology.

Linguistics: Intro to Linguistics, Sound & Structure of Language.

Math: Discrete Mathematics, Linear Algebra, Calculus I through III, Probability.

RELEVANT EXPERIENCE

Programming Language and Techniques | *Teaching Assistant* | University of Pennsylvania

Aug. 2023 – Present

- Taught recitation once a week for 4 semesters, reviewing relevant course concepts, such functional vs. imperative languages, object-oriented programming, basic data structures (trees, maps), etc.
- Answered 150+ questions in office hours, assisting students with weekly programming assignments, ranging from chat server applications to simple machine learning model using Markov chains
- Serve as head of review, organizing and leading 3 two-hour review sessions per semester and filming review videos

Sealing Technologies | *Software Engineering Intern* | Product Development Team

May 2024 – Aug. 2024

- Collaborated with a cybersecurity team to develop a touchscreen interface for their newest generation of servers
- Learned Linux command line, JavaFX, and shell scripting to create a sleek user interface in Java while simultaneously communicating with the Linux based operating system that runs the touchscreen
- Became proficient in Git and Agile workflow with Atlassian's Jira system, enhancing skills in product development and collaboration

TECHNICAL PROJECTS

Caffeind | *Human Computer Interaction Final Project* | University of Pennsylvania

Spring 2024

- Led the design and implementation of a mobile interface for Caffeind using Figma, with peer reviews before development in React Native; showcased the final product at the end of the semester using Xcode
- Developed UI components such as cafe-specific search filters; pages for reviews, favorites, and profile information.

AchieveNow Web Application | *Full-stack Developer* | Hack4Impact

Fall 2023

- Developed an app featuring four user-specific portals (administrators/staff, coaches, teachers, students/parents) to facilitate attendance tracking, student progress visualization, lesson resource management, and display student-coach pairings through shared, editable dashboards and organized blocks for observations and next steps
- Collaborated on the front-end using React, Node.js, CSS, and HTML to create an accessible platform for coaches, teachers, parents, and students. Utilized MongoDB for database management

LEADERSHIP EXPERIENCE

ColorStack at Penn | *Co-founder and Co-president* | University of Pennsylvania

Aug. 2024 - Present

- Founded ColorStack@Penn, part of the national organization supporting Black & Latinx Computer Science students
- Lead monthly meetings that strengthen technical/behavioral interview skills, discuss emerging tech trends, and provide academic success strategies and peer support

Engineering Deans' Advisory Board | *Board Member* | University of Pennsylvania

Sep. 2023 - Present

- Served as a Project Lead for EDAB's Internal Transfer Experience project, collaborating with Penn Engineering faculty to create the first dedicated orientation program for internal transfers, piloted on August 30, 2024
- Previously managed EDAB's online presence, including website updates, social media engagement, and branding efforts as the Chair of Media and Design (2024)