

Sara Pavlinek

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Education

Carnegie Mellon University, Bachelor of Science in Computer Science Aug 2022 - May 2026

- HCI concentration, Game Design minor
- GPA: 3.6/4.0 (SCS Dean's List)

Relevant Courses: Machine Learning, Distributed Systems, Design and Analysis of Algorithms, Theoretical Computer Science, Designing Human-Centered Software, Computer Systems, Computer Graphics, Game Design Studio

Work Experience

Software Engineering Intern, Confetti Jun 2025 - Aug 2025

- Developed full-stack features including in-app store, LLM-generated posts, and user authentication flow, for **MOSH** social music app using Swift and JavaScript, integrating Spotify API for seamless user experience and improved data management
- Architected backend infrastructure using Firebase Firestore, Firebase Authentication, and Google Cloud Functions with real-time database optimization
- Reduced API calls by 20% by implementing data caching, batch operations, and query optimization techniques, along with Firebase pagination for efficient data retrieval
- Collaborated in rapid iteration cycles, integrating user feedback from testing sessions into same-day design pivots using Xcode development environment

Research Assistant & Software Engineering Intern, NoriLLA Jun 2024 - Present

- Implemented AR game using OpenCV, Processing and PyTorch deep learning models to measurably improve children's STEM learning outcomes through AI-powered educational experiences
- Analyzed gameplay conversations using OpenAI Whisper and R statistical analysis, discovering that AI feedback increased dialogue and collaboration between children and parents

Teaching Assistant, Fundamentals of Programming (Python) Jan 2024 - Dec 2024

- Mentored students from first-time coders to confident developers—one student credited the experience with landing an AI startup internship and switching their major to CS.

Computational Biology Intern, Institute of Biotechnology CAS Jul - Aug 2023

- Built pipelines for genome alignment, streamlining the processing of large-scale genomic datasets.
- Proved ISL1 is required for the development of spiral ganglion neurons.

Select Projects

Simulated Facial Expression Generation Project, CMU RASL Sep 2023 - May 2024

- Implemented a Python-based face model using PyQt5 to simulate dynamic facial expressions on a personal fitness trainer robot.
- Supported research investigating how verbal and non-verbal robot feedback influences human performance.

VERVIT |Flutter, Android Studios Mar - Nov 2021

- Developed an app that teaches seniors how to navigate technology during COVID-19 isolation.
- Designed intuitive interfaces and accessibility-first features—such as large tap targets, high-contrast themes, and clear onboarding—driven by real-world user testing with elderly users

HackCMU Hackathon: 'Grow' |HTML, CSS, JavaScript HackCMU 2022

- Won Meta's Sponsor Challenge for creating the best hack that helps users connect, explore, and unlock opportunities in the metaverse by developing an interactive virtual plant-growing experience.

Flytrap Adventures Jan - May 2023

- Collaborated as level designer and programmer using Unity game engine, crafting interactive gameplay mechanics and environmental systems using C# and Unity development tools
- Implemented version control with Git for collaborative team development and asset management

Languages and Programs

- **Programming Languages:** Python, C, Swift, C++, SML, Processing, JavaScript, HTML, R, Flutter, Dart
- **Software/Tools:** Xcode, Firebase, Android Studio, Unity, Figma, LaTeX, Git, Google Cloud Functions