Charles Wang

zwcharl@gmail.com
(301) 272-5740
linkedin.com/in/zwcharl/
charleszw.com

Education

University of Pennsylvania · *Philadelphia, PA* *expected May 2026*
School of Engineering & Applied Science *GPA: 3.70/4.0*
Candidate for Bachelor of Science in Engineering

Major: Computer Graphics (Digital Media Design); *Minor:* Design
Relevant coursework: Interactive Computer Graphics; Computer Systems; Computational Linear Algebra; Data Structures and Algorithms; Art, Design and Digital Culture

Relevant Experience

University of Pennsylvania *August 2023 — present*
Full Stack Developer
- Designed and shipped an online playground for writing Scallop, a neurosymbolic programming language written in Rust, successfully running most queries in ~2 seconds
- Architected and implemented 2 API routes between the Next.js frontend and Flask backend via tRPC and Prisma
- Extend the platform to support user authentication, multiple project support, and project creation from templates through 9 interactive demos from the research paper

Engineering Summer Academy at Penn *July 2023*
Residential Teaching Assistant
- Supported professor in teaching 50+ high school students a college-level computer science course using Python and Jupyter notebooks
- Planned daily activities for 7 students across 3 weeks while on a limited budget
- Aided students' learning through out-of-classroom support via Ed Discussion, daily office hours, and 1 supplemental homework

New America *June — August 2023*
build4good Intern
- Overhauled the build4good website and fixed 9 critical accessibility and screen reader issues with WordPress and Elementor
- Researched and contributed findings on user interaction and design with regards to interactive geological timelines, providing guidance on the top 3 tools to achieve this

Leadership

TEDxPenn *October 2022 — present*
Design Team
- Designed main theme logo and branding for last year's conference, (R)EVOLUTION, with 700+ attendees and featured speakers like Anthony Russo
- Create and uphold a cohesive brand language for all outward-facing aspects of the organization, including team merchandise, 15 social media posts, and other materials.

Penn UPGRADE *January 2023 — present*
Event Organizer, Public Relations
- Coordinate, plan, and prepare events for Penn's premier game development club, including a field trip to PAX East, 1 club-wide game jam, and 2 speaker events
- Service communication channels like Instagram and Discord, and design posters, flyers, and brochures for further student outreach

PennApps *February 2023 — present*
Creative Team
- Brainstorm and create all visual aspects of the world's oldest collegiate hackathon to keep the event visually cohesive and inviting.

Penn ACM SIGGRAPH Chapter *October 2022 — present*
Webmaster, Board Member
- Coordinate activities and events including workshops, demo reels, and guest speakers.
- Manage and continually update the club website using Next.js and Three.js.

Technical Skills

Languages
C++, GLSL, JavaScript/TypeScript, Java, C#, Python

Platforms + Tools
Git, GitHub, Vercel, Linux, Unity, Photoshop, Illustrator, Figma, WordPress, Astro

Frameworks + Libraries
React, Next.js, Tailwind CSS, OpenGL, Qt, tRPC, Prisma

Selected Projects

sddm-theme-corners
Extremely customizable login theme for SDDM, a session manager for Linux, written in QML

charl.sh
Personal website made with Astro, React, and Tailwind CSS

RCW
Endless Unity minigame about matching colors and text, based on the Stroop effect

Interests

Open source, procedural graphics, front end, functional programming, UI/UX design, game development

Running, playing bass guitar, reading manga, designing album covers, Geometry Dash