

Swan Carpenter

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thingsbyspoon.cc
github.com/pitworker

Swan is a software engineer building highly interactive web-based experiences with cutting-edge AI/ML tools.

Education

Carnegie Mellon University
Class of 2021
Bachelor of Computer Science and Arts
Focus in CS and Environments Design
QPA 3.61, College Honors

Relevant Coursework

Computer Science
Computer Systems
Parallel & Sequential Algorithms
Theoretical Ideas in Computer Science
Principles of Imperative Computation
Applied Machine Learning
Robotics for Creative Practice
Conlanging with Language Technologies
Matrices and Linear Transformations
Calculus in Three Dimensions
Probability

Design
Environments Design I, II, III
Algorithmic Textile Design
Experimental Capture
Futures
Systems
How People Work

Skillset

Web	Graphics
JavaScript	Figma
TypeScript	Adobe XD
React	Illustrator
NextJS	Photoshop
Tailwind CSS	MapBox
Sass	WebGL
NodeJS	p5.js
Electron	HTML5 Canvas
WebAssembly	
Google Cloud	Multimedia
Cloudflare	TouchDesigner
	8th Wall AR
Native	FFMPEG
Python	Media Encoder
Java	Premiere Pro
C/C++	Unity
Rust	MediaPipe
C#	Google Speech to Text
Swift	
Management	Generative AI
Git	ChatGPT
Bash/Shell	Google Gemini
	Midjourney

Honors and Awards

Armero Award for Inclusive Creativity
2021
Capstone Project Award for *Zobits*

Pittsburgh AAF Award
2023
Gold for *Netflix Stranger Things Clock*

National American Advertising Award
2023
Gold for *Doodles Genesis Factory*

Work Experience

Fullstack Developer | studios5C
October 2023 - Present
Building key **frontend** and **backend** features for consumer-facing web applications and platforms; using **TypeScript, React, HTML, CSS, NodeJS, Python, Figma, and Cloudflare**. Clients include Deeplocal, Nik Bentel Studio, Magic Circle Game Studio, and Mars.

Creative Technologist, Software Engineer | Deeplocal
June 2021 - May 2022 (lvl. 1), May 2022 - October 2023 (lvl. 2)
Leading **software engineering** on, and contributing to **creative concept development** for award-winning **interactive web** and **physical experiences**; using **JavaScript, TypeScript, React, HTML, CSS, NodeJS, Figma, Adobe CC, Google Cloud Platform, and AI APIs**. Clients include Google, Meta, Netflix, TikTok, Museum of the Future, and Virgin.

UX Prototyping Intern | Motional (Aptiv-Hyundai JV)
June 2020 - August 2020
Prototyping and developing functional demo of a 3D map view within the management software for a large fleet of autonomous vehicles; using **JavaScript, HTML, and CSS**. Designs have since been implemented into the production software.

UX Prototyping Intern | Aptiv
July 2019 - August 2019
Designing and implementing interactive, location-based, contextual UI elements for in-car passenger displays in autonomous vehicles; using **Java** and **Android Studio**.

Notable Work

Magic Circle Platform-Wide Tutorials | Professional
Feature launched February 2024
Owned implementation of a platform-wide tutorials feature for an online social gaming platform. Feature is customizable per-game, and built on a stack of **TypeScript** and **React** on a serverless **Cloudflare** infrastructure. UX prototyping in **Figma**.

Google Cloud Next Postcards | Professional
Launched August 2023
Contributed to **concept development** and led software engineering for a microsite through which event visitors submitted travel memories to create and print postcards with custom AI-generated illustrations and messages. Stack included a **NextJS**-based frontend using Google's **Imagen** and **PaLM** (now **Gemini**) generative AI APIs, and a **NodeJS** server managing a series of printers. UX prototyping in **Figma**.

Virgin Voyages Jen AI | Professional
Launched June 2023
Collaborated on development of a **Google Cloud Platform** hosted **TypeScript** middleware **REST API** interfacing between frontend and AI server to generate, stitch, and stream custom (consensual) deepfakes featuring Jennifer Lopez inviting the recipient on a personalized Virgin cruise experience. Video stitching pipeline using custom **FFMPEG** scripts.

TikTok TAC Moderation Workstation | Professional
First site launched February 2023, subsequent sites launched later
Designed transition motion, led software development and served as primary contributor for a set of kiosks demonstrating TikTok's moderation process. Kiosk application designed in **Figma** and built in **JavaScript, NodeJS, and Electron** with full multilingual support and **Strapi**-based, client-facing content management system.

Mobile-Powered Synthesizer | Professional
Completed September 2022
Contributed to a mobile web app and accompanying SDK for a line of Android phone powered MIDI synthesizers. Was responsible for major pieces of the **JavaScript/DOM** website and **Dart/Flutter** mobile app, as well as **documentation** for the app's SDK.

Google Store Year in Search Activation | Professional
Launched December 2021
Developed an interactive installation version of Google's annual Year in Search video. Making use of **TouchDesigner**, **BlazePose** skeleton tracking and **Google Speech to Text**, and **Media Encoder**, the activation allowed store visitors to ask for in-depth search highlights from each month of 2021.