

# EVAN KIRKILES

Programmer & Artist

📍 Greater New York Area

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## EDUCATION

### Yale University

B.S. Computer Science, GPA 3.85

**Coursework** Data Structures, Algorithms, Deep Learning for Big Data, Systems Programming, Computational Vision, Creative Embedded Systems, Linear Algebra

**Leadership** Founder, Yale Student 3D Graphics Club; Founder, Yale Experiment Programmers Organization; Studio Member, Design at Yale; Member, Yale Computer Society

New Haven, CT

09/2020 – 05/2024

## EXPERIENCE

### Praxis Pioneering

Software Engineer Intern

- Architected Postgres database schema for vector similarity search over 100k+ timeseries.
  - Implemented Python and React clients for timeseries analysis, now a main Praxis deliverable.
  - Built low-level wrapper around uPlot, allowing 60fps synchronized graphing of multiple timeseries.
- Python / FastAPI / Postgres / TypeScript / React / Google Cloud

Miami, FL

06/2022 – 08/2022

### Levy Decision Neuroscience Lab

Lead Developer

- Implemented automatic MTurk HIT posting, worker notification, bonusing, and payment.
  - Converted lab experiments to web-based JS experiments, saving testing population during Covid.
  - Coded Unity WebGL experiments and JS Canvas-based games, increasing subject engagement.
  - Founded [YEPQ](#) to consolidate programming work across labs, now with 20+ members.
- Python / Flask / JavaScript / React / WebGL / C# / Unity / AWS

New Haven, CT

12/2020 – Present

### Rescale

Software Engineer Intern

- Translated C# file transfer client to C++/Qt interface, now supporting cross-platform customer use.
  - Restructured testing suites, improving testing suite run times and resource allocation.
- C++ / Qt / Azure

San Francisco, CA

6/2019 – 8/2019

## PROJECTS

### Software

- **2022.** Began [Paperarium Designer](#), a FOSS cross-platform 3D model unfolding application using Qt, C++, and Vulkan. Created [Paperarium](#), an online compendium for papercrafting, using Next.js and Supabase. Designed and coded the website for the [Yale Experiment Programmers Organization](#) with Next.js. Built browser-based 3D WebGL game engine with raycasting, physics, and controls using Three.js.
- **2021.** Implemented a dashboard for NYU-CCL's PsiTurk framework to allow responsive, no-CLI deployment of web behavioral experiments. Built [3thread](#), an online closet and outfit designer web app, using AWS Amplify and React with on-the-fly image manipulation in AWS Lambdas.

### Integrated Art

- **2022.** Began [A Bit of Personal Space](#), a documentation of personal places scanned with Polycam and uploaded to the web anonymously. Unfolded generative models to make paper figurines for local zines. Designed a visual art installation for the Yale CCAM remapping views outside of windows into digital manipulatable models to be re-projected onto the windows, using Three.js.
- **2021.** Started the [Nobot Space](#), an artistic exploration of nostalgia and cyber futurism. Uses 3D visual pipelines running in the cloud on AWS Lambda containers, and coded in Blender's low-level Python API. Combined with Adobe Premiere Pro for animation and connected to AWS Cognito for per-user bespoke models.

### Embedded Systems

- **2022.** Built an ESP32-based remote control security camera enclosed in junk using C and Node. Built an ESP32-based controller for websocket manipulation of online avatars using C and Node.
- **2021.** Built modular Raspberry Pi-based WiFi AP to broadcast an offline website up to 80 ft around the wearer.

## LANGUAGES

**Python** - Flask, numpy, pandas...  
**TS / JS** - React, Next.js, Svelte...  
**C#** - Unity, .NET Framework...  
**C++ / C / SQL / Go / Java**  
**HTML / CSS / Sass**

## SKILLS

**Providers** - AWS, GCP, Azure  
**3D** - Blender, OpenGL, Three.js...  
**2D** - Figma, Photoshop, Illustrator...  
GraphQL / Terraform / Docker  
nginx / Linux / Raspberry Pi

## OPEN SOURCE

**AWS Amplify Docs**  
- 1 merged pull request, 2022  
**NYU-CCL PsiTurk Framework**  
- 3 merged pull requests, 2021  
**Microsoft Azure Storage C++ API**  
- 1 merged pull request, 2019