

# Allena Oglivie

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## Education & Coursework

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### University of California, Berkeley

Berkeley, CA

*Bachelor of Arts, Computer Science*

*Class of 2027*

**Coursework:** Discrete Math, Linear Algebra, Multivariable Calculus, Data Structures & Algorithms, Computer Architecture

**Honors:** Girls Make Games, African American Initiative, HSF Fund, SSS STEM Grant Recipient, America On Tech

**Bootcamps:** AI4ALL Fall 2025 Cohort, America on Tech Data Science Fellowship

## Technical Skills

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**Programming & Backend:** Java, Swift, Python, C/C++, HTML5, CSS, JavaScript, TypeScript, Risc-V, SQL

**Frameworks & Libraries:** React, Redux, TailwindCSS, OAuth2, NumPy, Pandas, Matplotlib, PyTorch

**Tools & Platforms:** XCode, Git, Firebase, Colab, Jupyter Lab, Adobe Creative Suite, Figma

## Projects & Leadership

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### Deep Learning Level Generation Platformer Game

Berkeley, California

#### AI4ALL Fall 2025 Cohort

Fall 2025 – Current

- Trained a Variational Autoencoder (VAE) to generate playable Super Mario-style levels from Video Game Level Corpus ([VGLC](#)) dataset, achieving coherent level generation with platformer design constraints
- Implemented Generative Adversarial Network (GAN) for adaptive level generation responding to player behavior through reinforcement learning
- Conducted model training, evaluation, and hyperparameter tuning using train/test splits and feature importance analysis for level playability

### UC GameCrafters Research Group

Berkeley, California

#### “Orbito” Game Developer

Fall 2025 – Current

- Engineered algorithms in C, JavaScript, and Python using Computational Game Theory & Discrete Math to strongly solve Orbito, enabling game AI to predict all possible moves to play perfectly
- Optimized game UI across terminal and web interfaces, implementing responsive design patterns and quality-of-life features to enhance user experience and accessibility, live on [GamesCrafter's website](#)

### HotSpot App - iOS Social Discovery App

Berkeley, California

#### Student Startup, UX Designer & Swift Developer

Fall 2023 – Fall 2024

- Led end-to-end UX design and Swift development for iOS social app deployed to App Store with 100+ active Berkeley student users
- Integrated MapKit API for location-based features and implemented responsive UI components translating Figma prototypes to production Swift code

### Vision Hack: South LA Hackathon

Los Angeles, California

#### Lead Software Developer

July 2025

- Engineered a full-stack web application using Firebase Studio, analyzed Steam game libraries via Steam API, and generated personalized weekly gaming schedules using Google Gemini API
- Configured server infrastructure and end-to-end API connections, GraphQL, between Steam, Firebase and Gemini services, managing real-time data storage, user authentication, and database queries

## Work Experience

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### Kaiser Permanente

Hybrid

#### Marketing Consultant Intern

Summer 2024

- Analyzed social media engagement across 5 digital platforms using data analytics, SQL to understand customer behavior and optimize community outreach strategies
- Created and distributed weekly "ICYMI" newsletter synthesizing social media trends and community insights
- Developed new webpages on Gender Affirmation care, putting info across five states into one streamlined webpage

### ID Tech & Cal STEM

Remote

#### Computer Science Teacher

May 2025 - Current

- Created custom curricula on Python, HTML, Java, C/C++, Adobe Suite for 50+ students, implementing object-oriented programming, data structures, game development concepts, skills, and projects