

# ZACHARY KAPLAN

## SOFTWARE ENGINEER

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### EDUCATION & ATHLETIC EXPERIENCE

#### Pomona College, Claremont, CA

- Major Computer Science, Minor Economics
- 3.78 GPA(Unweighted)
- Division III Men's Water Polo Champion 2021
- Pomona-Pitzer Mens Water Polo 2021-2024
- Academic All American 2021, 2022, 2023, 2024

#### The Hill School, Pottstown, PA - High School Diploma 2021

- 3.95 GPA(Unweighted)/4.46(Weighted)
- Academic All-American 2019, 2020
- Nominated team captain 2020-2021 by all teammates

### RELEVANT COURSE WORK

#### Usable Security and Privacy

- Conducted a user study on LLMs' ability to improve privacy policy transparency.

#### Artificial Intelligence

- Developed search algorithms(Breadth-first, Depth-first search, Best-first search, Greedy best-first search A\*) and heuristics in a virtual environment.

Algorithms(CS140), Computer Systems(CS105), Game Development, Artificial Intelligence, Data Structures(CS64), Econometrics(Econ167)

### OTHER COURSES

### PROFESSIONAL EXPERIENCE

#### TERRAPIN REWARDS Lead full-stack web developer 2025-present

- Developed a full-stack customer loyalty platform using React 19, TypeScript, and Supabase (PostgreSQL + PostGIS), enabling local businesses to engage customers through QR check-ins and points-based rewards
- Designed and implemented custom SQL schemas with row-level security (RLS) and rate limiting, supporting secure multi-tenant architecture for business and customer accounts
- Built interactive analytics dashboards with real-time updates, Square API payment integration, and MapLibre GL maps, streamlining business operations and improving customer retention visibility

#### MINDSPROUT.AI

- Integrate the LLM model(Claude 3.5) into the product.
- Set up back-end infrastructure using containerization.

#### MYNETDIARY INC Intern- Marlton, NJ 2020-2020, 2021-2021

- Analyzed, documented, and reported data to the principal developer.
- Compared application functions and features to those of other competing websites.
- Provided developers with vital information to further improve their products.

### SOFTWARE PROJECTS

#### Crypto Price Tracker

- Built a full-stack TypeScript application using Next.js and Node.js to stream live crypto prices from via Playwright automation.
- Designed scalable resource sharing system for Playwright instances and dynamic ticker management with real-time price updates.

#### Custom Cross-Validation Framework for Panel Data

- Built a Python-based cross-validation generator to prevent temporal and cross-sectional leakage in ML model evaluation.
- Implemented a full data preprocessing, feature engineering, and model training pipeline in Google Colab using Pandas, Scikit-learn, and XGBoost.

#### 3D Runner- Space Race

- Developed using C# and Unity Engine. Collaborated with group members on Github.
- Implemented physics-based wall-jumping mechanics and dynamic obstacle generation system for endless runner gameplay.
- Engineered collision detection and player movement controls with gravity-shifting between perpendicular surfaces.

### SKILLS

Python, Java, JavaScript, Typescript, SQL, Bootstrap, React, C++, C#, HTML, CSS, Unity Engine, Team Collaboration, Communication, Django, Go, Bash, Haskell, Git