TAEDON RETH

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EDUCATION

University of California, Santa Barbara (UCSB)   **June 2026**
Bachelor of Science in Computer Science (GPA: 3.80 / 4.00)   *Santa Barbara, CA*
Relevant Coursework: Machine Learning, Operating Systems, Databases, Computer Architecture, Data Structures & Algorithms

EXPERIENCE

Zoox   **June 2025 – Present**
Software Engineer, Contract   *Foster City, CA*
- Engineered a unified, Python-based workflow that automates master health validation, saving 12 hours of manual effort weekly. Managing automated test execution, triaging failures, and reverting PRs that introduce regressions in real-time.
- Overhauled the CI pipeline by eliminating low-value tests while optimizing coverage, which cut PR validation time by 60% and significantly increased code throughput.

Benioff Ocean Science Labratory   **January 2025 – June 2025**
Software Engineer Intern   *Santa Barbara, CA*
- Developed a React-based single-page application (SPA) with Tailwind CSS and Canvas API, creating interactive minigames to teach children key computer vision concepts such as data quality, annotation, and model accuracy.
- Showcased the game at the UN Ocean Conference in France; integrated into classrooms and clubs at Goleta Elementary School to teach over 500 students computer vision concepts, demonstrating real-world educational impact and global reach.

UCSB Computer Science Department   **September 2024 – December 2024**
Undergraduate Learning Assistant (CS 16: Intro to C++)   *Santa Barbara, CA*
- Assisted 100+ students in understanding core C++ concepts, debugging code, and developing problem-solving strategies in lab sections. Led additional exam preparation study sessions, improving student grades, engagement, and programming progress.
- Held lab and drop-in sessions to further reinforce class material such as: frequent testing, avoiding repetition, and consistency.

UCSB Statistics Department   **November 2022 – June 2023**
Data Science Research Assistant (Under Dario Ochoa)   *Santa Barbara, CA*
- Collaborated with PhD student to conduct a data collection experiment of 150+ participants. Analyzed relationships between economic decisions and player psychology using R Studio and linear regression, yielding 10% more accurate predictions.
- Utilized excel to organize, format, and accentuate information from survey results, alleviated weeks of manual parsing.

PERSONAL PROJECTS

Gaucho Graduate | *React, Next.js, TypeScript, Node.js, Prisma ORM, PostgreSQL*   **January 2025 - March 2025**
- Designed and implemented an automated course catalog system that processes and serves data from UCSB's academic database, handling complex scheduling constraints and course relationships.
- Built a drag-and-drop course scheduling interface with real-time validation of prerequisites and graduation requirements, coupled with a responsive UI using Tailwind CSS for seamless performance across desktop and mobile devices.
- Developed API endpoints for course management and user data persistence, integrating OAuth with Google for secure authentication and ensuring efficient data handling.

Traveler | *React, JavaScript, Node.js, OpenAI API, OpenWeather API*   **August 2024 – December 2024**
- Developed a full-stack web application using Node.js and Express that streamlines trip planning through drag-and-drop itinerary building, real-time weather integration, and AI-powered travel recommendations.

Digit Recognition | *Python, NumPy, Matplotlib, Jupyter Notebook*   **September 2024**
- Built a digit recognition neural network from scratch using Python, achieving an accuracy of 82% on test data. Trained the model on the MNIST dataset, preprocessed data using Numpy, and visualized results with Matplotlib.

SKILLS AND INTERESTS

Programming Languages: C++, Python, JavaScript, TypeScript, R, & SQL
Languages: English (Fluent), Khmer (Conversational), Mandarin (Conversational), & Cantonese (Conversational)
Interests: Reading, Basketball, Weightlifting, Outdoor Running, Philosophy, and R&B Music