

# Havyn Nguyen

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## EDUCATION

**University of California - San Diego, B.S. in Mathematics-Computer Science**, GPA: 3.33 / 4.0 *Sep 2023 - June 2027*

**Relevant Coursework:** Data Structures & Algorithms, Practice of Data Science, Recommender Systems & Web Mining, Software Engineering, Online Database Analytics Applications, Working with Large Code Bases

**Member:** Association of Computing Machinery, Vietnamese Student Association, Eclipse Analytics, Triton Software Engineering

## TECHNICAL SKILLS

**Programming Languages:** Python, SQL, Java, C++, HTML/CSS, JavaScript, TypeScript,

**Frameworks & Tools:** Node.js, Express.js, REST APIs, PostgreSQL, MySQL, SQLite, Redis, Supabase, JWT, OpenAPI, OpenTelemetry, React, Next.js, Vite, Tailwind CSS, React Query, React Hook, Plotly, Docker, CI/CD, AWS: EC2, S3, RDS, Lambda, Cloudwatch, Vercel, Jest, pytest

## PROJECTS

**Web Analytics Pipeline** | JavaScript, Node.js/Express, MySQL, REST APIs, SPA Dashboard *Feb 2026*

- Built an end-to-end analytics pipeline (collector → ingestion → processing → storage → reporting API → dashboard) to convert browser events into queryable product metrics.
- Implemented a client-side collector using sendBeacon/fetch to capture pageviews, clicks, errors, and Web Vitals with an extensible plugin-style interface.
- Developed ingestion endpoints with payload validation/sanitization, enrichment, and sessionization before persisting analytics data into MySQL.
- Designed a normalized MySQL schema for events/sessions/errors/performance, wrote indexed aggregation queries, and exposed authenticated JSON endpoints powering dashboard charts and date filters. Analytics/Plausible surface actionable telemetry.

**VSA at UCSD Website — Full-Stack Data Platform** | React, Supabase, TypeScript *May 2025*

- Built a full-stack platform for member registration, event sign-ins, and point-based rewards supporting 300+ members.
- Shipped a mobile-first React/TypeScript UI with Tailwind CSS and reusable component patterns; deployed production frontend on Vercel.
- Implemented backend services on Supabase (PostgreSQL) with auth-protected routes and Row Level Security (RLS) to restrict access to member data.
- Configured environment secrets + role policies in Supabase and production env vars in Vercel to support secure deploys.

**League of Legends Analysis Project** | Python, pandas, scikit-learn, Plotly *Oct 2025*

- Built an ETL + modeling pipeline using Oracle's Elixir pro match data to evaluate how jungle gank priority (bot vs top) affects objective control and win probability.
- Cleaned and transformed 10K+ player-game records; engineered features and exported outputs as JSON for a React UI.
- Ran hypothesis testing and permutation tests ( $\alpha=0.05$ ) to quantify the relationship between bot-focused ganks and dragon control beyond simple correlation.
- Trained and tuned logistic regression and random forest models with cross-validation; improved ROC-AUC from  $\sim 0.55$  to  $\sim 0.85$  and analyzed performance across strategy subgroups.

**Study Sessions API** | Node.js (Express), PostgreSQL, Docker Compose, GitHub Actions, Jest, Supertest *Mar 2026*

- Built an Express + Postgres REST API for tracking study sessions with validation and parameterized queries.
- Designed Postgres schema + init migration for sessions with timestamps and indexes; added filtering by course/date range
- Containerized the API + Postgres using Docker Compose with DB health checks and automatic dependency startup for reliable local/prod parity.
- Wrote 11 Jest + Supertest integration tests covering CRUD flows and error cases
- Added CI gate to build the Docker image after tests pass to catch container/runtime issues early.

## WORK EXPERIENCES

### UCSD Chiba Lab

*Research Analyst* | Python, pandas, data pipelines, EDA

**La Jolla, CA**

*May 2025 – Present*

- Built Python pipelines to ingest, clean, and transform auditory + biometric time-series data for downstream analysis.
- Created reusable scripts for feature extraction, QC, and visualization to standardize analysis workflows across studies.

### Stradling Law

*Summer Intern* | Excel, hardware/software support, SQL

**Newport Beach, CA**

*Jun 2022 - Aug 2022*

- Streamlined data entry + validation workflows, reducing document preparation time by  $\sim 25\%$ .

## LEADERSHIP

### Vietnamese Student Association at UCSD

*Co-Events Coordinator*

**La Jolla, CA**

*May 2025 – Present*

- Managed website + analytics tools, enabling streamlined event check-ins for 300+ members
- Supported event planning and digital engagement, improving retention and participation

### Association for Computing Machinery AI

*Social Lead*

**La Jolla, CA**

*Sep 2025 – Present*

- Host and coordinate AI-focused community events drawing 100+ students per quarter