

# Viet Minh (Hieu) Nguyen

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## Education

### University of California San Diego

Expected June 2027

San Diego, California

Bachelor of Science in Data Science And Applied Math (GPA: 3.8 / 4.00)

- **Relevant Coursework:** Data Structures and algorithms for Data Science (python), Mathematical Probability, Accel. Java programming, Applied Linear Algebra, Foundations of Real Analysis I, Mathematical Reasoning

## Experience

### UCSD – Information Technology Services

Jun 2025 – Present

San Diego, CA

Continuous Service Improvement Student Assistant

- Created frameworks and training for Service Owner Checklist to improve accountability.
- Created and managed 20+ visualizations on ServiceNow dashboards and tracked metrics to measure service improvements.
- Built reports on process reviews to deliver data-driven recommendations.
- Standardized tools and coordinated outreach for Process Palooza planning.

### UCSD – Triton Engineering Student Council

SEP 2024 – Present

San Diego, CA

Full-stack Software Engineer & Front-End lead

- Designed and implemented dynamic, interactive user interfaces with React.JS,
- Leveraged Vite to enhance the development environment, speeding up build times by 100% .
- Optimised Front End Code using lazy loading strategies, decreasing LCP load times by 50% and FCP by 90% across the website
- Participated in weekly code reviews and QA'ing sessions of other developers on the team

### UCSD – Data Science Student Society

SEP 2024 – Present

San Diego, CA

Front-end Software Engineer

- Utilised best coding practices to write clean code and create front-end user interfaces for the data science student societies's website.
- Leveraged agile methodologies in weekly sprints to optimise production time

## Projects

### Ecocoins | HTML, CSS, Javascript, Typescript, React.js, Firebase Auth, Firestore DB

<https://ecocoin-5ecb6.web.app/>

- Led the development of a microservices-based platform using Firebase noSQL, incorporating full CRUD functionality and authentication of users
- Developed in cooperation with Vice Principle as a solution to promote plastic recycling
- Architect-ed transaction protocol between users and admins, streamlining transaction process by 70%

### Wave Function Collapse Simulator for 2-D terrain Generation | NEXT.JS, TailwindCSS

[jaerinx.github.io/2dterrain/](https://jaerinx.github.io/2dterrain/)

- Designed and developed an interactive visualizer tool simulating operation of 2-D terrain generation algorithms Wave Function Collapse and Model Synthesis.
- Utilised Next.js SSR to optimise algorithm and page operation speed, increasing overall performance of simulation by 50%

### TESC-Portal | React.js, Supabase, PostgreSQL

- Developed a centralized portal for managing club memberships, event attendance, and announcements for TESC
- Implemented role-based access with separate views for internal members, club leaders, and general users
- Built bulletin board features including event posting, RSVP tracking, and searchable event listings
- Contributed to the student points tracking system and profile management tools for clubs

## Technical Skills

**Languages:** Python, JavaScript (ES6+), TypeScript, HTML, CSS, SQL, Java

**Technologies:** React.js, Next.js, Firebase (Auth, Firestore), Supabase (Auth, PostgreSQL), Vite, Tailwind CSS, Bootstrap, Git, GitHub, Node.js, REST APIs, SSR, Vercel

**Concepts:** SSR (Server-Side Rendering), authentication & authorization, CRUD operations, responsive design, pathfinding, genetic algorithms, UI/UX optimization, Agile methodology, version control, lazy loading, load time optimization, client-server architecture, data modeling