Viet Minh (Hieu) Nguyen

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Education

University of California San Diego Expected June 2027

Bachelor of Science in Data Science (GPA: 3.89 / 4.00) *San Diego, California*

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

Experience

UCSD SEP 2024 – Present

Software Engineer *San Diego, CA*

- 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%
- responsible for 30% of the codebase

UCSD SEP 2024 – Present

Software Engineer *San Diego, CA*

- 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%

2-D Terrain generator and Path-finding Simulator | *Python*

- As a single-man development team, designed and developed a procedural simulation of path-finding agents
- Developed and Integrated A*, Djisktra, BFS and DFS algorithms
- Authored a 20-page dissertation comparing performance metrics of modern pathfinding algorithms against Genetic Algorithms

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

Technical Skills

Languages: HTML, CSS, Javascript, Typescript, Python, Java, SQL, Matlab
Technologies: React.js, Node.js, PostgreSQL, NoSQL, Tailwindcss, Bootstrap, Firebase Auth, Firestore DB
Concepts: Lazy Loading, Genetic Algorithms, Reinforced Learning, Agile Methodology, Version Control, Cloud technologies, REST API