Hieu Nguyen

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PROJECTS

CURRENCY MANAGEMENT APP | Sole programming lead
June 2021-June 2022 |HTML,CSS, Javascript, TypeScript, REACT.JS, Firebase
- Singly designed, wrote and implemented a React app complete with account authentication, currency addition through admin interface and coupon trading and transaction management

2-D TERRAIN GENERATOR AND PATH-FINDING SIMULATOR | Part of a research project in improving pathfinding with Genetic algorithms
June 2021 -May 2023 | Python: Pygame
- Wrote simulator algorithms for Terrain generation on a 2-D square grid and A*, Dijkstra, Randomwalk, Best-First-Search and Depth-First-Search algorithms

STOCK CONTROL MANAGER AND VISUALISER | Sole programming lead
June 2021-June 2022 | Java, SQLite
- Singly designed, wrote and implemented a Java app to manage the stock of a small student-owned Instagram business that sold clothes.
- Included functionality for visualisation of monthly revenue and profit

MODEL SYNTHESIS AND WAVE FUNCTION COLLAPSE VISUALISER FOR 2-D TERRAIN GENERATION | Personal Project
Jan 2024 | React.JS, NEXT.JS, TailwindCSS
- Personal project to simulate and compare operation of both Model Synthesis for terrain generation in an environment with: water, sand, grass, rocks, and trees terrains

WEEK TASK TRACKER | Personal Project
March 2024 | React.JS, NEXT.JS, TailwindCSS, Firestore database
- Personal project to track completion and priority of tasks I need to do throughout a week. Tasks are automatically deleted if they are completed and the day has passed
- Link:// **week-tracker-ad123.web.app/**

RESEARCH

INTERNATIONAL BACCALAUREAT EXTENDED ESSAY | Student
June 2021 – May 2023
Worked alone investigating and completing a 4000 word essay on investigating procedurally generated Genetic Algorithms and their performance against conventional path-finding algorithms such as A*, Dijkstra and Depth-First Search

EDUCATION

UNIVERSITY OF CALIFORNIA SAN DIEGO
Bachelor of Science in Mathematics-Computer Science with minor in Data science
Expected June 2027
Provost Honors   Cum. GPA: 3.889 / 4.0

SKILLS

PROGRAMMING
3+ years:
Python • HTML• CSS• JavaScript 1+ years:
SQL • REACT.JS• Typescript•Java
0+ years:
Matlab •

COURSEWORK

UNDERGRADUATE
Calculus I-III
Linear Algebra
Applied Linear Algebra
Symbolic Logic
Introduction to Probability
Accelerated Introduction to Programming

LINKS

LinkedIn:// **/Hieu Nguyen**