Coleman Lai

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Skills

- Languages/Frameworks: HTML/CSS/JavaScript, TypeScript, SQL, Python, C, C++, C#, React, Node.js, TailwindCSS
- Programs/Tools: Visual Studio Code, Git, OpenAl API, MATLAB, PyTest, WebSocket, Unity, WordPress
- Knowledge Base: Object-oriented programming, linear algebra, probability/set/graph theory, DSA, calculus

Project Experience

Data Dave | nwHacks Hackathon: 600+ people | Collaborative | 8

Jan 2025

- Developed a CSV analysis AI assistant with a React-TypeScript frontend and a Flask-WebSocket backend
- Engineered a context-aware LLM system to prevent AI context loss and hallucinations, ensuring accurate analysis
- Implemented dynamic visualization generation and data analysis using OpenAI API's function calling capability

MACHI-NE- | Collaborative | @

Oct - Dec 2024

- Developed an interactive emergency report app using React-TypeScript, enabling real-time incident visualization
- Created a frontend interface with dynamic map markers, interactive map movement, and incident filtering
- Used Agile techniques to manage development, including sprint planning and iterative feature delivery

SFU Scheduler | Collaborative | 🔗

Sep - Dec 2024

- Developed a web application using HTML, CSS, and JavaScript that integrates the SFU Course Outlines REST API
 to generate conflict-free schedules based on user-selected courses, increasing students' ability to plan effectively
- Designed and implemented a robust scheduling algorithm to account for varying course components such as tutorials, online courses, and labs, ensuring accurate, conflict-free options for a variety of course combinations
- Assisted team members in debugging and ensuring good programming practice, creating clean and readable code

Be Square (Best Al Hack) | StormHacks Hackathon: 400+ people | Collaborative | 🔗

Oct 2024

- Developed an Adobe Express add-on using JavaScript, integrating OpenAI's API for creative element generation and modification through commands in natural language, enhancing user accessibility and workflow efficiency
- Implemented OpenAI integration by setting up function calls for capability of natural language processing
- Worked collaboratively within tight time constraints by using paired programming techniques to accomplish tasks

Origami Fractions | Self-Directed | 3

Jul 2024

- Developed a web application using HTML, CSS, and JavaScript that calculates and visualizes folding sequences to divide a square sheet of paper into user-specified fractions, assisting origami artists with precise folding steps
- Utilized SVG tools to create dynamic visualizations of folding algorithms, making complex techniques accessible
- Applied modular design techniques to structure visualizations and algorithms for reusability and versatility

Work Experience

Website Enhancement and Administration | iListen Canada

Jul - Oct 2024

- Upgraded company website built on WordPress, ensuring alignment with company values and increasing appeal
- Constructed a well-documented maintenance document, containing results of a needs analysis of the site
- Injected custom functions and styling using HTML, CSS, JavaScript, and PHP to improve design and functionality

Assistant Camp Coordinator | Children's Summer Camp at CCM Canada

Jun - Aug 2019

- Led a large group of children in activities including games and crafts through clear, age-appropriate instructions
- Developed and taught structured lessons twice weekly with focused activities and exercises, fostering effective communication through clear, concise explanations and encouraging feedback to gauge comprehension

Education