NAM NGUYEN

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Technical Skills

Programming Languages: Python, Java, HTML, CSS, JavaScript, TypeScript, SQL
Libraries/Frameworks & Databases: React.js, Node.js, Express.js, Tailwind CSS, Spring, PostgreSQL
Developer Tools: Visual Studio Code, Figma, Git, Docker

Personal Projects

Roaming App | *React Native, Expo, Firebase, Express.js, Cloudinary, MapLibre, Google Gemini* February - May 2025

- Developed a full-stack mobile app with Express.js backend APIs, Firestore real-time database, and a responsive React Native frontend, reaching 95% feature completion within 8 weeks and supporting secure user authentication with Firebase.
- Integrated Cloudinary for optimized image hosting by adjusting upload ratio and quality settings, improving rendering speed and reducing cloud storage usage.
- Enhanced user journey visualization and creativity by mapping geotagged posts with MapLibre and generating personalized captions and travel ideas via Gemini AI, creating a seamless and engaging exploration experience.

Hotelytics | *Python, GeoPandas, Streamlit, OSMnx, Folium, Networkx, scikit-learn* April 2025

- Performed exploratory spatial analysis on 80+ Vancouver hotels using weighted amenity scoring within a 350m buffer and generated data-driven hotel rankings to support real-time, user-specific recommendations.
- Engineered an interactive Streamlit app integrating Folium and OSMnx, reducing user trip planning time through dynamic map layers, amenity-based UI filters, and optimized walkable tour routes.
- Implemented DBSCAN clustering to visualize 17,000+ amenities as convex hulls, revealing spatial activity zones and enhancing hotel decision-making.
- Designed and compared Travelling Salesman Problem (TSP) and Greedy Nearest Neighbor (GNN) routing algorithms on pedestrian networks from OSMnx, improving tour efficiency by ~15% with TSP solutions.

Sort Visualizer | *TypeScript, React.js, CSS* January 2025

- Designed and developed an interactive web app to visualize both comparison-based and non-comparison-based sorting algorithms, translating abstract logic into intuitive animations for learning and exploration.
- Showcased time and space complexity through dynamic visuals, with real-time audio feedback and a Dune-inspired UI to promote engagement and deeper understanding of algorithm behaviour.
- Implemented algorithms in TypeScript for type safety and improved code reliability.

Realtor Web Application | *HTML, CSS, JavaScript, Java, Spring, PostgreSQL, Docker* January - April 2024

- Collaborated in an Agile team to develop a full-stack web app that enhanced a realtor's digital presence and client engagement.
- Led frontend development and worked closely with the client to gather requirements, present design options, and refine the UI based on real estate industry trends, resulting in a 95% client satisfaction rate.
- Integrated property mapping using Google Maps API and built a secure backend with PostgreSQL and Spring Boot.

Non-Technical Experience

Cashiers and Customer Service | *Canadian Tire Grandview* November 2021 - April 2024

- Collaborated effectively with team members and acted as an intermediary between customers and manufacturers.
- Resolved both routine and unexpected problems by understanding and adhering to company policies, ensuring customer satisfaction and clear communication.
- Maintained a positive attitude and high-quality service under pressure during busy periods.

Education

Simon Fraser University | *Burnaby, BC* January 2023 - Present
B.sc. Computing Science

- Dean's List: Fall 2024 and Spring 2025