Michael Da

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Education

University of Waterloo Waterloo, ON

Bachelor of Environmental Studies in Geomatics, Minor in Computer Science

Experience

Technical Coordinator January 2025 – Present

University of Waterloo AWS Club *Waterloo, ON*

- Presented seminars on AWS Lambda, S3, EC2, and Elastic Beanstalk
- Hosted workshops on the introduction of cloud computing and cybersecurity
- Supported club members on usage of data analysis & AI tools for management of biz accounting

Technical Coordinator September 2024 – December 2024

University of Waterloo Geospatial Club *Waterloo, ON*

- Led workshops on learning ArcGIS and QGIS, enhancing GIS literacy among undergraduate students
- Demonstrated Esri's interactive 3D Mars map to showcase planetary GIS capabilities and visualization tools
- Utilized ArcGIS to analyze transit networks across the Greater Toronto Area to provide potential improvements

Tutor July 2023 – June 2024

Upper Markham Learning Centre *Markham, ON*

- Created personalized lesson plans for 10+ students, increasing top 5 average to over 90% within 3 months
- Taught 1-on-1 lessons on Calculus & Vectors, Advance Function, and elementary Singapore Math
- Provided ESL students in translation of their coursework into English, resulting successful transition out of the ESL program into regular classes

Projects

PlugNear | *Python, Next.js, Tailwind CSS, Mapbox GL, Docker*

- Developed a full-stack web application with Next.js frontend and Flask backend for locating EV charging stations
- Integrated Mapbox GL JS for advanced interactive mapping capabilities, enabling users to visualize charging station locations geographically
- Utilized coordinate-based data structures and spatial indexing to optimize location-based queries and improve application performance

Tree Canopy Detection from Drone Imagery | *QGIS, Python* May 2018 – May 2020

- Captured high-resolution orthomosaic imagery using DJI Mini 4 Pro drone to survey a park area
- Applied the VARI (Visible Atmospherically Resistant Index) in QGIS for vegetation identification
- Converted vegetation masks into tree canopy polygons and refined outputs through geospatial analysis
- Produced interactive 3D model for clear visual interpretation

Technical Skills

Languages: Python, R, SQL, JavaScript, HTML, CSS, Racket, R
GIS & Remote Sensing: ArcGIS Pro, ArcGIS Online, QGIS, Survey123, Mapbox, FME, DJI Fly, Dronelink, Luma
Tools & DevOps: Git, Google Cloud Platform, OpenAI, Gemini, Supabase, AWS S3, AutoCAD, Adobe (Photoshop, Premiere Pro), Google workspace, Figma