Alan Wu

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Professional Summary

Geomatics master's graduate with strong technical skills in GIS analysis and development seeking a career position as a GIS Analyst/Developer. Proficient in using ESRI, ArcGIS pro, QGIS, R, SQL, and Excel to conduct geospatial data analysis, advanced GIS for environmental management, and satellite image processing.

Education

The University of British Columbia **Vancouver, BC**
Master's Degree, Master of Geomatics for Environmental Management July 2022 - May 2023

- Geospatial Data Analysis, Advanced GIS for Environmental Management, Image Processing

University of Toronto **Toronto, ON**
Honours Bachelor of Science, Mathematics & Environmental Science Double major Sep 2019 - June 2022

Skills and Certifications

- **GIS Analysis tools:** ESRI, ArcGIS pro, QGIS, R (terra, raster), Python (Arcpy, Geopandas)
- **GIS Development tools:** HTML, CSS, JavaScript, Openlayers, PostGIS, Leaflet, Mapbox, GeoServer
- **Data Processing Language:** Python (Pandas, Numpy), SQL, R, Excel
- **Visualization Tools:** Tableau, Excel, R (ggplot2), Power BI, Visio, Python (Matplotlib)
- **Modeling:** Multiple Linear Regression (Predictive Analysis, Risk Assessment), Random Forest
- **Certifications:** Google Data Analytics, Google Finance Data Analyst, CFI Data Science and Machine Learning Fundamental, KPMG Data Analytics Consulting Virtual Internship Participant

Work Experience

Blue Ventures (ESRI, ArcGIS pro, QGIS, R, Tableau, Excel) **Vancouver, BC**
GIS Analyst (Capstone Project) Sep 2022 - Apr 2023

- Performed data collection and analysis of PlanetScope satellite imagery with R and ArcGIS pro to create highly detailed maps with 100 times higher spatial resolution covering over 10,700 sq km of mangroves
- Utilized QGIS to derive CRAs of 9 different land cover types, and achieved overall accuracies of over 90% for identifying 3 classes of mangrove subtypes using R-built supervised classification models
- Created and presented data visualizations in Tableau and Excel to showcase key insights on mangrove dynamics in Northwestern Madagascar, informing conservation efforts and management strategies.

Alpha Libertée (Python, Tableau, Research) **Toronto, ON**
Environmental Sustainability Researcher Feb 2022 - Mar 2022

- Researched Carbon Footprint generated by Hut 8 Mining Corp during transactions of tokens, and presented findings to Hut 8 stakeholders led to a 20% decrease in Scope 1 and Scope 2 Emissions
- Improved the accuracy of AI assistant Daisy's prediction on effective methods to reduce CO2 output of tokens by 25% through training with Chia Network's use of low-capacity HDDs to keep low energy costs
- Developed a comprehensive 20-page report on the best ways to limit emissions caused by electricity consumption of mining operations, which included a dashboard and a predictive model built with Python, resulting in a 30% increase in data readiness and efficiency.

Beijing Sanjin Fengqing Catering Management Co., Ltd. (Python, R, SQL, Excel) **Beijing, China**
Data Analyst Sep 2020 - June 2021

- Utilized SQL and Python (Pandas) to clean and integrate data from the company's POS system, improving the personalized guest experience and raising positive ratings from 90% to 97% by analyzing order preferences, reservation habits, and demographics
- Built predictive models using Python and R to forecast future revenue with over 80% accuracy, reduce food waste by 30%, and optimize staffing by predicting customer trends and busiest time periods.
- Collaborated with cross-functional departments like Marketing to create a Lunchtime Voucher named YinPiao, which increased customer loyalty and generated around 3000 revisits and $42,000 in revenue over 3 months.

Project Experience

GIS-based Photo Sharing Installable APP (Mapbox, WebGIS, HTML, CSS, JavaScript, Firebase) May 2023

- Developed a secure web-based GIS application for data sharing and mapping, with a user-friendly interface, offline access capability, and interactive map provided by Mapbox GL LS
- Designed and implemented a secure authentication system on Firebase with encrypted passwords and validation checks to protect user privacy and ensure secure data access, resulting in a 95% user satisfaction rate
- Customized map style for visually appealing and easy-to-understand data representation, resulting in a 30% increase in user engagement and a 20% increase in data sharing compared to the previous map style
- Conducted thorough testing and debugging, resulting in a 99.9% error-free application, and received positive user feedback on the application's interface and security, with a 4.8/5 user rating.