Adam Vert

Developer, Data Analyst

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Education

Bachelor of Science, Honours Mathematical Physics 3B
University of Waterloo

Programming

Advanced

- Python
- R
- Excel
- Git

Working Knowledge

- Linux
- CSS
- LaTeX
- HTML
- JavaScript
- MATLAB

Technical Skills

- Data Analysis
  - Real-Time Analysis
  - Predictive Analysis
  - Geographical Analysis
  - Descriptive Analysis
  - High Level Visuals
- Machine Learning
- Pipeline Creation/Maintenance
- Algorithm Development and Optimization
- GUI Creation

Awards

- Raj Saini MP Achievement Award
- University of Waterloo Presidents Scholarship
- South-West Regional Soccer League MVP

Summary of Qualifications

- Developed industry leading algorithms using **machine learning** optimizations at both Environment Canada and in the field of wearable accelerometers.
- Created efficient and easy to use **GUIs** for file conversion, data pipelines and interactive visuals.
- While leading a small team through the pandemic lockdowns, **increased productivity** through opening channels of communications and prioritizing well organized meetings.
- Displayed **initiative** by independently marketing a successful launch of a startup website exceeding site traffic goals by over 300%.

Working Experience

Full-Stack Developer   Jan 2020 - Present
NiMBaL Research and Development Lab, Waterloo

- **Algorithm Development:** Developed a novel approach for determining when an accelerometer is not being worn that had an industry leading accuracy.
- **Pipeline Creation:** Theorized and implemented an efficient pipeline that ran seven complex algorithms in parallel to create a readable output for publication.
- **Project Management:** As the lead programmer in the organization increased productivity after lockdowns began through facilitating weekly meetings, creating more open channels of communications and assigning tasks and deadlines related to statistical outputs and algorithm development.
- **File Conversion Application:** Created an application with a dynamic and simple to use GUI that converted binary files into the EDF format.

Data Analyst   Jan 2019 - Dec 2019
Environment and Climate Change Canada, Toronto

- **Data mining Tool:** Developed a python-based data mining script that analyzed relationships between over a billion data points in under three minutes.
- **Real-time Fog Detection Algorithm:** Created, mapped and implemented a real-time fog detection algorithm using shell scripts, Python and internal mapping softwares.
- **Fog Prediction Model Using Machine Learning:** Developed a machine learning algorithm that uses the real-time data from the fog detection model to train a fog prediction model with the highest. Both the real-time detection and prediction models are still being used successfully at Environment Canada.

Local Engagement Coordinator   Jun 2018 - Aug 2018
Project Neutral, Waterloo

- **Successful Launch of Waterloo Startup:** Spearheaded the successful launch of *ProjectNeutral.org* to the Waterloo Region surpassing traffic expectations by over 300%.

Personal Projects

Garmin Map Over Time   Feb 2019 - Present

- Using Python, Google Maps API, Shell Scripting and JavaScript, created a tool that displays a variety of interactive maps of all places traveled with a Garmin watch.

MatrixMaster.herokuapp.com   March 2019 - Apr 2019

- Co-created an opensource linear algebra computational website.

Extra-Curricular Activities

Volunteer Developer   Dec 2020 - Present
Statistics Without Borders

- With a dataset of 2000 Ethiopian Children enrolled in a 10 year study, I am developing a system that will automatically find correlations and trends.

Community Outreach Ambassador   Aug 2018 - Present
Project Neutral, Waterloo

- Manage events and outreach programs to promote the Project Neutral application.
- Present the application at events and workshops for both individuals and groups.