Alexander Wyllie

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Experience

Software Engineer - Dilex Networks   **June 2018 - Present**

Dilex Networks is a data engineering and consulting company.
Experimented with shortest path and maximum flow algorithms for geographical routing applications using swift and QGIS. Developed AI/ML models, with particular emphasis on data pre-processing and normalization. Developed single-sign on web portals powered by AWS Cognito and reactJS.

Software / Electrical Engineering Intern - Space Tango   **August 2020 - June 2021**

Space Tango builds autonomous experiments for the International Space Station.
Worked as part of a multidisciplinary team to develop autonomous experiments aboard the International Space Station, and was responsible for software development and hardware-software integration. Software projects included microscopy and imaging software developed in Python, satellite communication software developed in C, and a primitive distributed computing framework. Contributed to a revamp of payload hardware testing, advocated for extended payload validation periods, and laid the groundwork for automated software testing. Also empowered team members to conduct hardware testing without needing a software specialist to oversee payload software during testing regimes.

Academic Researcher - Nanyang Technological University   **June 2018 - August 2018**

With Dr. Zinovi Rabinovich and Dr. Svetlana Obraztsova, developed a new model for belief representation in influence propagation experiments. Performed literature review, and aided in the design of experiments. Developed a simulation for evaluating the model using python

Developer - Formatim for iOS and Android   **December 2015 - June 2018**

Developed iOS app that applied Natural Language Processing techniques to provide advanced dictionary lookup for a Latin-to-English dictionary. The app was initially released in March 2017.

Education

Bachelors of Computer Science in Computer Science   **August 2016 - December 2019**
Bachelors of Science in Mathematics   **January 2018 - December 2019**
University of Kentucky

Included:
- A research abroad experience to Nanyang Technological University
- A graduate course in theory and models of computation
- Undergraduate courses in artificial intelligence, machine learning, cyptology, graph theory
- An AR/VR project for iOS and Android

Skills

Programming languages: Python, Swift, C, C++, Java, reactJS, SQL
Dev Tools: XCode, Jetbrains, Eclipse, MS Visual Studio, Vim, Git, Jenkins, Maven, NodeJS
Data Science: Jupyter Notebooks, Scipy, Scikit-learn, Pandas, Numpy, Keras, MatPlotLib, MatLab, Gurobi, R, PyTorch, Tensorflow, Docker, Kubernetes
General: LaTeX, Autocad, Unity, Blender, Arduino, ffmpeg, gstreamer
Languages: Native English speaker, some French, some Japanese

I am fully vaccinated against COVID-19, and am willing to work remote, in-office, or hybrid.