DANIEL SOLA

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EDUCATION

University of Waterloo   *2019 - Present*
Master of Applied Science, Systems Design Engineering
University of Calgary   *2014 - 2018*
Bachelor of Science, Honours in Geophysics   Overall GPA: 3.85

TECHNICAL STRENGTHS

Languages & Tools	Python, Matlab, C++, SQL, git
Development	HTML, CSS, Flask, Dash, Tableau
Libraries	PyTorch, Tensorflow, SciPy, Scikit-Learn, Pandas, Matplotlib, BeautifulSoup
Machine Learning	CNN, SVM, Random Forest, Ensemble Methods, Logistic Regression

RELEVANT EXPERIENCE

Graduate Student, University of Waterloo   *September 2019 - Present*

- Automated interpretation of satellite imagery utilizing deep learning methods.

- Modifying and developing various CNN architectures for semantic segmentation.

Data Science and Geology Intern, Teine Energy   *May 2019 - Feb 2019 (Jan/Feb Part-Time)*

- Achieved >90% precision with logistic regression to predict oil-rich zones from unbalanced data.

- Built a web app using Flask and Dash for geologists to visualize and interpret model results.

- New workflow is now used to explore new areas and led to the purchase of an annual data subscription.

Research Assistant, University of Calgary   *Summers of 2016, 2017, 2018*

- Developed a CNN to interpret time lapse geophysical sections for gas migration.

- Applied multivariate nonlinear regression to determine geologic boundary interfaces.

- Correlated fracture data to well logs and discovered predictable trends highlighting sweet spots.

PROJECTS

Diarisation & Voice Recognition

In collaboration with a colleague, I modified one of VGG Oxford's state of the art CNNs to identify which celebrity sounds most like a given clip of audio. The VGGVox dataset (>40 GB) was used to train this network. A small web app was developed where a user can record their voice and the app tells them which celebrity they sound like over time as their voice changes.

Predicting Dividend Stock Returns

Small python library to predict exactly how a portfolio would react to predicted price changes based on TD brokerage guidelines. Some of the features of this library include: Visualizing the collective returns of a portfolio, Comparing portfolio strategies, Simulating DRIP accounts based on dividend changes, Linking accounts for scheduled deposits/withdrawals.

Finance Lead - Geophysics Industry Field Trip   *2017-2019*

Volunteered over 100 hours in obtaining sponsorship, securing venue hosts and managing finances while contributing in a team environment. Raised $16,300, a $4,300 improvement from the previous year.