

Daniel Fan

DATA SCIENTIST · MACHINE LEARNING CONSULTANT

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Skills

Programming	Python, SQL, PANDAS, TensorFlow, SciKitLearn, NumPy, Keras, MATLAB, C (basic), R, Tableau
Machine Learning	Neural Networks, Reinforcement Learning, Deep Learning, Optimization, Classification, Regression, Clustering, Weka
Amazon Web Services	EC2, Lambda, Elasticsearch, RDS
Visualisation and Reporting	Tableau, Excel, PowerBI
Version Control	Git, Github, Bitbucket
Languages	English, Mandarin
Ways of Working	Software Development Life Cycle using Agile methodologies.

Work Experience

Fonterra

Auckland, New Zealand

DATA SCIENTIST

May, 2018 - Current

- Created mathematical models to perform descriptive and predictive analytics on data.
- Collected and cleaned data to for use in insight extraction.
- Engaged stakeholders in advisory role to bridge the business use case to technical solutions.
- Lead team workshops to enable technical development and upskilling.
- Implemented Agile methodologies and set ways of working standards for team.

Debatebot

Auckland, New Zealand

CHIEF DATA SCIENTIST

Nov. 2017 - Aug. 2019

- Designed data pipeline to ingest 60 million academic papers into a Neo4j database.
- Applied natural language processing methods to extract topics and summaries from articles.

State University of New York, Binghamton

New York, USA

TEACHING ASSISTANT

Aug. 2014 - Apr. 2016

- Troubleshooted student Arduino projects and instructed the construction of corresponding circuits.
- Instructed students in coding concepts in using MATLAB.

Accomplishments

Transport Planning Optimization

Auckland, New Zealand

PROJECT LEAD

Jan. 2019 - May. 2019

- Performed transport optimization that resulted in a reduction of over \$800,000 in annual operating costs.
- Designed and implemented solution architecture to integrate AWS, robotic process automation and python simulations to generate optimization report.

Fuel Procurement

Auckland, New Zealand

PROJECT LEAD

Jan. 2019 - Feb. 2019

- Extracted insights from historic sales data and devised plans for fuel procurement with savings of over \$2.1 million.

Rapid Product Development Tool

Auckland, New Zealand

PROJECT LEAD

Sep. 2018 - Dec. 2018

- Built a R&D tool for product development using multivariate models to describe the relationship between taste and ingredients.
- Reduced average product development cycle time-frame by 30 percent.

Manufacture Process Improvement through Anomaly Detection

Auckland, New Zealand

PROJECT LEAD

May. 2018 - Jun. 2018

- Enabled root cause detection and reduced manufacture downtime by 20 percent.
- Engineered and synchronized factory process data from multiple streams.
- Built python graphical dashboard to surface the data for the detection of anomalies.

Evolution of Echo State Networks

Auckland, New Zealand

STUDENT

May. 2015 - May. 2017

- Investigated Echo State Networks(ESN) abilities to predict time-series data of varying complexity.
- Identified the effects of neural network size, level of connectivity, and spectral radius on network performance.
- Developed MATLAB algorithms to evolve the ESN through the implementation of anti-Oja neural plasticity rules.
- Designed novel algorithms in MATLAB for the selective update of neuron connections in ESNs based on perceived neuron importance from a pre-training phase.

Education

Binghamton University, State University of New York

New York, USA

DOCTOR OF PHILOSOPHY - DID NOT FINISH

Aug. 2014 - Did Not Finish

- Fully Funded Teaching Assistantship

Binghamton University, State University of New York

New York, USA

MASTER OF SCIENCE IN ELECTRICAL AND COMPUTER ENGINEERING

Aug. 2014 - May. 2017

- GPA:3.9 - Eta Kappa Nu

University of Auckland

Auckland, New Zealand

MASTER OF ENGINEERING IN ELECTRICAL AND ELECTRONICS ENGINEERING

Feb. 2012 - Feb. 2013

- Second Class Honors.

University of Auckland

Auckland, New Zealand

BACHELOR OF ENGINEERING IN ELECTRICAL AND ELECTRONICS ENGINEERING

Mar. 2008 - Dec. 2011

- Second Class Honors.

Extracurricular Activity

Taiwanese Student Association

New York, USA

CORE MEMBER & PRESIDENT IN 2015

Aug. 2014 - Dec. 2017

- Coordinate dwelling and transport for new students arriving at the university.
- Planned student events and information sessions for Taiwanese students at start/end of each semester.
- Hold cultural events and information sessions promoting Taiwanese culture for university functions.