

ADAM GREEN

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SUMMARY

Data professional with experience in both data science and data engineering, with expert domain knowledge of energy systems. The focus of my career is to use data in the fight against climate change.

Passionate about teaching & mentoring of new data professionals, with five years experience teaching data science. My long term dream is to start New Zealand's first data science bootcamp in Christchurch.

Currently my goal is to continue my technical & professional development by working for technology companies using the cloud and Python, along with developing my professional network in Christchurch.

EMPLOYMENT

Jan. 2021 to Current - Data Engineer - Gridcognition - Remote

Building the data engineering systems for an early stage energy startup:

- Worked as the sole data engineer in a team of five software engineers, supporting them with data services to improve the core React product,
- Built an AWS Lambda Python service to request & store data on AWS S3 from a paid third party.
- Built a pipeline with Python & Pandas to process customer time series data into Parquet files on S3. Converted a single Jupyter Notebook developed by an analyst into a well tested & scalable pipeline using AWS Lambda.
- Created the data engineering infrastructure to process & store external market data. Introduced the idea of data orchestration by using Prefect to schedule & monitor our pipelines, with execution on Docker images on AWS ECS.
- Used AWS Athena & S3 to deliver data to business users via named AWS Athena SQL queries, with a Python Streamlit app to monitor data quality.
- Developed business intelligence pipelines in Prefect, with analysis in Pandas and visualization in Tableau.
- Incorporated unit, integration & system testing into all my work, with continuous integration & delivery via Github Actions.

Oct. 2020 to Jan. 2021 - Reinforcement Learning Consultant - Elia Group - Remote

Applying reinforcement learning to European energy trading - learning an off-policy value function from human expert data.

2019 to 2020 - Bootcamp Director - Data Science Retreat - Berlin

Management at one of Europe's longest-running data science bootcamps:

- Developed almost a full curriculum of data science courses, including test driven development, time series analysis, probability and statistics.
- Hands-on technical mentoring of 40 student projects, including tabular data, computer vision, NLP and reinforcement learning.
- Interviewing and selection of students, Supporting their technical & professional development during the program.
- Lead the school to be named in SwitchUp's Best Data Science Bootcamps in 2020 - an honour the school had not received in its five year history.

2017 to 2019 - Energy Data Scientist - Tempus Energy - London & Remote

Worked on unlocking flexible electricity demand in Australia in an early-stage company. Part of a technical team of data scientists and software engineers:

- Developed a mixed-integer linear programming optimization model to optimize the dispatch of battery storage and to measure the accuracy of our price forecasting. Model was put into production in a Docker container.
- Built reinforcement learning models in Tensorflow to control electric battery storage and flexible chiller demand.
- Used random forests, gradient boosting & deep learning time series forecasting of NEM electricity prices.

2012 to 2016 - Energy Engineer - ENGIE - London

- Development of technical & financial (energy sale, O&M and discounted cash flow) models for large energy projects in Excel,
- Development and application of Mixed Integer Linear Programming models for optimization of some of the UK's largest industrial & district heating sites, including the 90 MWth district heating scheme at the London Olympic Park.

EDUCATION

2011 to 2012 - The University of Manchester - MSc Advanced Process Design for Energy.

2006 to 2010 - University of Canterbury - B.Eng Chemical & Process Engineering with Honors.