

Fraser Greenlee

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Work

Skyscanner - Software Engineer, Edinburgh, Scotland (Sept 2019-Present)

As part of the Data Transformation Tribe, I format raw datasets for critical internal systems.

- Led turning Machine Learning notebooks into PySpark/Batch jobs, providing reliable revenue projections.
- Java - Built new redirects pipeline converting legacy Java code into PySpark jobs handling >200 columns.
- Databricks - Discovered data quality issues by using Databricks to visualise our datasets.
- Redshift - Halved the size of a Redshift cluster by making an index based on user queries.
- Dimensional Modelling - Designed fact and dimension tables by speaking with teams across the business.

Apple - Software Engineering Intern, Cambridge, England (Jun-Aug 2018)

Devised vector dialogue tools used to create new Siri functionality.

- Java - Convert complex data structures into human-readable forms.
- Python - Made simulations of core components in Siri's dialogue infrastructure.
- Testing - Identified and recorded bugs in soon to be released Siri projects.

MyOptique Group - Software Engineering Intern, London, England (Jun-Sept 2017)

Launched an analytics tool that tracked every department's performance.

- Python - Designed an aggregator that tracked 86 metrics from a range of sources.
- Vue.js - Engineered the frontend with Vue using WebHook subscriptions to show live values on the site.
- Postgres - Devised a data model to store all the metrics and departments.
- GraphQL - Implemented an API for the database and fixed issues on howtographql.com

Education

University of Glasgow - BSc Software Engineering, 1st Class (2015-2019)

Projects/Awards

T5-VAE (March 2020-Present)

Converted [Google's T5 model](#) into a VAE that allows smooth transitions on sequences.

This model does not suffer from posterior collapse allowing the model to be larger than any before.

- Scraping - Made a [Kaggle dataset](#) of 1 million Python HackerRank solutions with state-changes.
- Pytorch - Converted a T5 transformer into an MMD-VAE and trained it on Python state changes.
- Google Cloud Platform - Trained models and stored data using GCP.
- Research - Used by researchers working on [representation learning](#) and [conversational search](#).

Live Coder (2019)

A [VSCode Extension](#) that shows how your code executes as you type.

Has over 3.5k installs and showcased during my [Pioneer livestream](#) with Instagram cofounder Mike Krieger.

Pioneer Award - Winner (2019)

Pioneer is a global startup tournament funded by Marc Andreessen and Stripe.

I won the [award](#) with my desc2code project that converted natural language into code using an LSTM.