

KEEGAN MCCALLUM | DATA ANALYST / WEB DEVELOPER

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PROFILE

- 3+ years of financial industry experience focusing on data analytics, optimisation, and large-scale data processing.
- 4 years experience in software development, focusing mostly on full stack web development, mobile application development, and data science.
- designed, built and manged product development of multiple high impact, production-scale applications
- participated in the hiring/interview process, comfortable building and managing a team of software developers
- Bachelor's of Computing from Queens University

SKILLS

- **Fullstack Web Development:** | React | Redux | D3 | Plotly | Matplotlib | HandsonGrid | JQuery | Dojo | ES2016 | AngularJS | NodeJS | Django | Flask | SailsJS | Socket.io | Deepstream.io | Pouch/CouchDB | Loopback | FeathersJS | | emotion(CSS-in-JS) | PWA | ServiceWorkers | SEO | claudiajs | Zappa | NextJS | AWS |
- **Mobile Development:** | Android(Java) | iOS(Objective-C) | React Native | Cordova | Parse |
- **Data Analytics:** | Pandas | Numpy | GLPK | Gurobi | Apach Spark | Hadoop | PostGreSQL | SQL Server | MariaDB | MongoDB | SQLite |
- **Machine Learning:** | Keras/Tensorflow | Magenta | LSTM | CNN | Spacy | NLTK | XGBoost |
- **Financial Management:** | Fixed Income Portfolio Management | Quantitative Finance | Linear Optimization | Statistics |

WORK

CTO | Grizzle (July 2017 - Present)

- managed, designed and implemented entire tech infrastuture as sole technical founder at a funded startup
 - Website Frontend:
 - Responsive site built using next.js, react, rebass, redux, emotion
 - Fully tested using storybooks as a base, jest snapshots and jest image snapshots for regression testing
 - PWA using service workers, all best practices from Google's lighthouse followed

- Implemented SEO best practices such as structured data, social graph metatags, canonical URLs
- Website Backend:
 - built using FeathersJS, PostgreSQL, and claudiajs(for deployment on AWS Lambda)
 - RESTFUL API which supports publishing articles from Superdesk, API key authentication, full text search with indices on all articles
- CMS:
 - Setup and customized the opens source project Superdesk for our needs
 - comfortable forking/modifying open source code
- Dev-ops:
 - Setup all deployments to be fully automated using GitLab CI, including automated tests
 - Setup custom docker deployments using docker compose, all with automated HTTPS encryption via letsencrypt, nginx as a reverse proxy
 - Managed deployments of Mautic(marketing automation), Metabase(business intelligence) and Superdesk(CMS)
 - Managed infrastuture on AWS as code using Terraform

Portfolio Analytics Specialist | TD Asset Management (Jan. 2014 - July 2017)

- Trade Blotter:
 - Architected and Managed Start to Finish
 - Full-featured trade modelling platform
 - Multi-window, real-time updates
 - Built using modern web technologies (React, Redux, Deepstream.io, Django Rest Framework)
- Bond Portfolio Optimizer:
 - Built and Architected Initial Production Release
 - Flexible Graphical User Interface to Build Complex Constraints
 - Multiple Objective Functions, Buy/Sell Lists
 - Built With Modern Data Analytics Tooling (Numpy, Pandas, Gurobi)

CTO | Personal Ventures (Sept. 2014 - June 2016)

- ReLease Rentals:
 - A mobile rental marketplace for the modern age with design cues taken from Uber and Tinder

- Built with React Native, PostgreSQL and FeathersJS
- UFESS:
 - Aggregator for University Confessions facebook pages with 2,000 active users at peak
 - Supported anonymous posting directly through the application
 - Built with Ionic, Cordova, Strongloop Loopback

Student | Queens University (Sept. 2014 - April 2016)

- Sign Language Tutor:
 - Created a tutor application which leveraged gesture-recognition technology to teach the user proper sign language
 - Created a classifier which recognized a number of signs and gave the user feedback in real-time
 - Built using the Myo Wristband, a custom-built Flexible Mobile phone prototype, and Cordova/Java
- Open World Queens University Video Game:
 - Scale, 3D model of Queens University Campus which the user can explore. 2 minigames triggered by entering certain areas
 - Built with Unreal Engine, C++

Open Source

- sql4pandas
 - wrote a compiler for the SQLite language specification to allow running sql commands directly against pandas dataframes, written in pure python

EDUCATION

- **Bachelors of Computing** | Queens University (Graduated April 2016)
- **Bachelors of Accounting and Financial Management** | University of Waterloo (left program after 3rd year)