

# DANIEL HOPPER

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I write code in Python, Go, Java, C++, Ruby, Javascript, and Clojure

I have used Hive, Pig, Django, MongoDB, and PostgreSQL

I have made things with Spark, Hadoop, RabbitMQ, and TensorFlow

I am interested in distributed systems, analytics, and machine learning



## EXPERIENCE

### FLYBITS | Backend Engineer | Summer 2017

- Lead development on an analytics pipeline powered by Google Cloud Dataflow / Apache Beam
- Developed a microservice written in Go that connects the Fitbit API to existing platform architecture
- Implemented custom functionality for complex API requests, all controlled by RabbitMQ
- Deployed and managed a local Kubernetes cluster and executed end to end testing for microservices

### A9 | Machine Learning Engineer | Fall 2016

- Trained a ranking model for Amazon Softlines, following the full process of data gathering, sampling, feature selection, and understanding the model's behaviour
- Built a tool for concurrent training of multiple classifiers using a sample of query data and customer segmentation data, with the goal of finding correlations in purchases for certain groups of people
- Conducted feature engineering experiments with large datasets, involving development of efficient data processing scripts written in R and Python with the pandas library

### POLAR | Analytics Infrastructure Engineer | Winter 2016

- Built a large portion of a new Spark-based analytics pipeline, using Spark SQL and Spark Streaming to get nearly real-time analytics processing from Polar's MediaVoice platform
- Worked on various data aggregators written in Python and Clojure, with a Django backend
- Deployed distributed VM clusters as test environments for Hadoop and Spark-based applications



## PROJECTS

### DOUBLE BOOKED | Clojure | [git.io/vHmUm](https://git.io/vHmUm)

- Clojure library that identifies pairs of conflicting events, developed as part of a coding challenge
- Exposes an event structure and two different algorithmic strategies, to demonstrate thought process

### UW CAL SHARE | Ruby on Rails, PostgreSQL

- Simple web app developed with a floormate while living in uWaterloo's Velocity Residence



## EDUCATION

### UNIVERSITY OF WATERLOO | Waterloo, ON | 2018

4A Honours Computer Science

Management Studies Minor