

# Itsi Weinstock

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Australian Citizen

## Core Skills

### Data Science

- Experimental **mathematical** and **statistical** models and optimization
- **Machine learning** and Bayesian learning (custom and OTS)
- Linear and nonlinear **optimization** using gradient methods, MILP, global optimizers and local heuristics
- Firm **theoretical grounding** in applied probability and pure statistics
- Implementation on distributed systems for **big data**
- **Data visualisation** & communication

### Project Management

- Delivering projects from **ideation to completion**
- **Developed leadership style**, attracting and retaining talent
- Broad **stakeholder engagement** skill
- Implementing Agile techniques

## Education

### Master of Science & BSc Mathematics and Statistics

University of Melbourne  
First class honours

## Languages

### Expert

Python • SQL • R • Julia

### Familiar

JavaScript • C • Java • MATLAB

## Tools

### Data Science

PyTorch • TensorFlow • Scikit-learn •  
Pandas • Numpy • Dask • Numba •  
PuLP • JuMP • Bokeh • Dagster

### General

Git • AWS • Linux •  $\LaTeX$

## Interests

Orchestral & Chamber Violin  
Writing & Performing Sketch Comedy  
Recipe development  
Applied ethics

## Current Work

**Quantitative Researcher** ..... *Akuna Capital*  
Jul 2020 – Present

- Statistical research into high and medium frequency trading signals across Hong Kong, Korea and Crypto markets; improving existing strategy profits up to 20% and producing high-Sharpe out-of-sample results in new strategies.
- Leading a project to develop trading filter layers using machine learning classification techniques incorporating wide new feature sets; producing better contextual decision making and improving the overall strategy.
- Optimizing algorithm parameterization across years of time-series data; designing backtesting fitness functions and using iterative global optimization and machine learning approaches to incorporate wider market features and double parameterization quality in production.
- Productionizing ad-hoc research models into continuous automated daily runs, resulting in 14x more frequent updates; producing better trading performance and allowing for more granular further research.
- Shifted local pandas-based data analysis on dozens of TBs to efficient pipelines using Dask over a 500+ node AWS cluster, reducing iteration time from 4 hours to 10 minutes, and increasing look-back from 1 month to 2 years.

**Co-founder & Director** ..... *Couchers.org*  
Mar 2020 - Present

- Designing and building a new digital platform in the share economy space to out-compete existing models and improve outcomes for users.
- Forming and directing a global organisation, creating and executing strategy for internal workflow and external growth.
- Attracting and coordinating dozens of specialists across fields into teams including software development, marketing, UI/UX and graphic design.

## Past Experience

**Blockchain Research** ..... *University of Melbourne*  
Jul 2018 – Oct 2019

- Research into developing and adapting techniques from machine learning to infer the topology of the peer-to-peer network underlying Bitcoin; and its implications into Bitcoin's pseudonymity properties.
- *The Bitcoin P2P Network Topology: a Review of Inference Techniques and Machine Learning Approach* available at [itsiweinstock.com/bitcoin](https://itsiweinstock.com/bitcoin)

**Teaching Assistant** ..... *Melbourne Business School*  
Mar 2019 – Oct 2019

- Designed and led seminars in the Master of Business Administration program for topics in Optimization and Decision Making.

**Project Coordinator** ..... *University of Melbourne*  
Feb 2017 - Dec 2019

- Developed large-scale arts and enterprise programs aimed at improving student engagement and university culture.
- Engaged, consulted and negotiated with stakeholders including coordinating cross-stakeholder meetings, conducting broad surveys, running proof-of-concept trial programs, and securing grants up to \$50,000.

**Analytics and AI Consulting Intern** ..... *Deloitte Consulting*  
Nov 2018 – Dec 2018

- Implemented and tested data models for Fortune 100 clients in the energy and automotive industries.
- Significantly improved project practices by automating data pipelining.

**Activities Officer** ..... *University of Melbourne Student Union*  
Dec 2015 - Sep 2017

- Managed a budget of \$120,000 to deliver social and cultural programs to the 50,000 students at the University.
- Recruited and organised 130 volunteers to coordinate and deliver events.
- Drafted/implemented policies improving student outcomes at the university.
- Coordinated events independently and in collaboration with other organisations and stakeholders, delivering 2-4 events per week across 24 weeks, for up to 700 students per event, a record in the organisation's history.