

EDUCATION

Singapore Management University Masters of IT in Business (Analytics)	Aug 2018 – Dec 2019
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Modules taken:

- Applied Machine Learning (Scikit-Learn, Keras)
- Text Analytics (NLTK)
- Database Management (MySQL, PHP, ER Diagrams)
- Data Analytics Lab (SAS JMP Pro, SAS Enterprise Miner)
- Algorithm Design & Implementation
- Applied Statistical Analysis with R
- IT Project & Vendor Management (based on PMP syllabus)

University of London, International Programme Bachelor of Science in Banking & Finance	Sep 2007 – Sep 2011
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Singapore Polytechnic Fundamentals of Data Science Certificate	April 2018 – Aug 2018
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WORK EXPERIENCE

Ministry Of Health Post Graduate Intern – Analytics & Information Management	Jan 2019 – Jun 2019
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- Extracted, cleaned and combined data from healthcare finance and various care settings.
- Conducted Exploratory Data Analysis (EDA), Feature Engineering and K-Means Clustering in R for Patient Bill Prediction project which helped Lead Analyst achieve model success.
- Learnt Tableau in 2 weeks, implemented and presented 2 dashboards for monitoring Adverse Drug Reactions (ADRs) to HSA. Under-reporting of ADRs can thus be tracked.
<https://desmondhw.github.io/ADR-Dashboards/>

Bank of Singapore Business Analyst – Business Transformation (Contract)	Apr 2018 – Dec 2018
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- Facilitated and drove accounts aggregation/analytics project with fintech firm Canopy.
- Won gold position in the bank's first Innovation Hub competition. Team received S\$1 mil to build a platform for classifying research reports and recommending investments. Implemented a prototype during master's Text Analytics module (under projects).
- Formulated UAT test plans and prepared data which enabled migration of client statements to digital platforms.
- Scheduled weekly meetings with project managers, business users, IT and vendors.

Caleb Investment Management Pte Ltd Owner/Futures Trader	Jan 2017 – Apr 2018
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- Tested, configured and deployed execution algorithm for strategy with programmer.
- Implemented risk management model by passing real-time data feeds into excel and VBA, capturing spread risk which most platforms lacked.

Brahman Capital Management Pte Ltd Hedge Fund Execution Trader	Jul 2015 – Dec 2016
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- FY 2015: 2-men team returned +40% on 1-2 mil AUM (in AUD, net of fees).
- Created execution algorithms in Trading Technologies Algo Design Lab. Configured and tested in-house algorithms with developers, increasing their performance and returns.

Propex Singapore Pte Ltd Proprietary Derivatives Trader	Nov 2011 – Jul 2015
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- Generated positive returns every year while adhering to firm's daily and monthly loss limits.

- Back-tested trading strategy on Python with intern using technical indicators, optimization and cross-validation (under projects).

OTHER EXPERIENCES

Wesley Methodist Church Volunteer

Oct 2011 - Current

Musician

- Serve in the music ministry either on bass, electric or acoustic guitar for services.

PROJECTS

Predicting Customer Conversion From Google Merchandise Store

Jun – Aug 2019

- Built Python Scikit-Learn machine learning models to predict if customers visiting Google's Merchandise Store would make a purchase in the next 7 days.

<https://github.com/desmondhw/GoogleMerchandiseProject>

Sentiment and Sector Classifier for Investment Research Reports

Jun – Aug 2019

- Used text analytics and machine learning models to classify investment research reports by sectors and market sentiment.

<https://github.com/desmondhw/InvestmentReportsClassifier>

Back-test of three-legged bond futures spread trading strategy

Oct 2014 – Mar 2015

- Quantitative mean reversion trading strategy using various optimizations and walk-forward.

<https://github.com/desmondhw/curvetenstens>

SKILLS/CERTIFICATIONS/INTERESTS

Proficient: Python, R Programming, Tableau, MS Office.

Familiar with: MySQL, SAS JMP Pro, SAS Enterprise Miner, Minitab, PHP.

Certifications: Python for Data, Ops and things – NUS ISS

Nov 2017

The Coder in You (HTML, CSS, JavaScript) – NUS ISS

Dec 2017

CMFAS M5

22 Jun 2010 – 22 Jun 2013

Health Insurance

24 Jun 2010 - 24 Jun 2010

Languages: Fluent in English and Mandarin.

Hobbies: Mountain-biking, electric bass, basketball, and running.