

# Michael Siers

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## Summary

During my PhD candidature, I worked in a consulting-style role through the university and as a contracting data scientist for a multi-million-dollar Melbourne company. This involved working on several medium-large scale projects including: implementation of bespoke machine learning (ML) software for NSW Health, data analysis to discover how to improve the lives of ageing people for a chain of aged care organisations, directly pitching ML opportunities to business owners and executives, helping to build a \$500,000+ data science team, and delivering tailored big data strategies for the next 1 to 2-years.

## Education

### **PhD in Data Science, Charles Sturt University**

2015-2018 (Submission in June - Immediately available for full-time work after.)

Thesis: "Data Science for Class Imbalanced and Cost-Sensitive Data"

### **Bachelor of Computer Science (Honours), Charles Sturt University**

2014, GPA: 7.0/7.0. Recipient of the Academic Excellence Award 2014.

Thesis: "The Application of Cost-Sensitive Data Mining to Software Defect Prediction."

### **Bachelor of Computer Science, Charles Sturt University**

2010-2013, GPA: 5.4/7.0

This included several courses fundamental to data science including Linear Algebra, Artificial Intelligence, Database Systems, Discrete Mathematics and Computer Aided Mathematics.

## Experience

Credit Clear | Southbank, Melbourne

Data Scientist (Contract) March 2017 – Current: 1 year, 1 month

The groundwork that I did here convinced the directors to invest in a data science team which I've been largely involved in building. I report directly to the Chief Technology Officer and compose documents for presentation to the board of directors.

### Responsibilities:

- Design of 1 to 2-year big data and machine learning strategies (Azure, ML)
- Predictive modelling and machine learning (Python, R, Java)
- Actionable insights extraction (Decision Trees, Clustering, SQL, R, dplyr)
- Directly work with CTO to build a team of data scientists
- Algorithm designs for enhancing current processes by incorporating machine learning

### Achievements:

- Demonstrated how data science can enhance current business processes, thereby convincing the directors to plan for a \$500K+ investment into a data science team.
- Designed several features which are now championed publicly to sell the product.
- Analysed the current state of the company to assess the skills and technologies required to implement the 1 to 2-year data strategy. This was thoroughly documented and is used to recruit data science candidates. The documentation is also used heavily to generate candidate suitability documentation for each applicant.



Charles Sturt University | Bathurst, Australia

Research Officer (Data Science) July 2015 – April 2017: 1 year, 10 months

I was fortunate to work in a consulting capacity for organisations external to the university. This included some awesome data science projects for the NSW government, local businesses, and aged care organisations. In this role, I was fortunate enough to work with 4 other brilliantly talented data scientists.

#### Responsibilities:

- Pitching data science projects to executives face-to-face.
- Actionable insights extraction (decision trees and clustering)
- Data wrangling & cleaning (Python, R, Java, Excel, Google Sheets)
- Data visualization (Tableau, Excel, Google Sheets)
- Database storage and querying (SQL, MS SQL, SQLite)

#### Achievements:

- Developed machine learning based software for the client: NSW Health. The software is now deployed and currently used by the client's data scientists to explore questions such as: "Which patients are most likely to be readmitted and why?" using advanced data mining algorithms.
- Discovered several key avenues for improvement in the quality of life for ageing persons. These were documented and presented to the project client – a chain of ageing persons' organisations.

## Published Algorithms for Data Science and Machine Learning

I've designed, evaluated and published 8 algorithms which are described in thorough detail in the publications which can be found on [my google scholar profile](#). Many of these algorithms were presented by myself at international conferences including Advanced Data Mining and Applications 2016, Australasian Joint Conference on AI 2015, Pacific Rim International Conference on Artificial Intelligence 2014, and Australasian Data Mining 2016.

## References

Contact information for my references can be obtained upon request.