

Liam Schoneveld

EDUCATION	Master of Science (Artificial Intelligence) 2015-2017 The University of Amsterdam <i>Weighted average mark of 8.5/10 (Cum Laude).</i>
	Bachelor of Commerce (Liberal Studies) 2009-2013 The University of Sydney <i>Majors in Economics and Econometrics. Weighted average mark of 79/100.</i>
	New South Wales (Australia) Higher School Certificate 2003-2008 Fort Street High School <i>University Admission Index of 98.45/100.</i>
PROFESSIONAL EXPERIENCE	Data Scientist (Deep Learning / Computer Vision), Pandascore Oct 2017-Present At Pandascore, the focus is on developing and deploying deep learning models for computer vision. We work in the eSports domain; essentially, we take footage from live streams of people playing video games and analyse it using computer vision. A key achievement for me here was the development of a model that could track players' positions on the minimap in League of Legends. The final approach relied on a GAN for data augmentation, and a convolutional-LSTM to account for the sequential nature of the data. I wrote about this work on my blog at nml.github.io The team at Pandascore is pleased with my ability to quickly produce and deploy high-quality models for various computer vision and other prediction tasks, and my ability to contribute novel solutions to some of the more challenging problems we encounter.
	Various Freelancing Roles, UpWork.com July 2018-Present Recently undertook some work for three different clients found on UpWork.com. These involved: predicting the genre of a piece of music given only the track's audio; implementing the 2015 'NetVLAD' paper in Keras for an image retrieval model, and; exploring various machine learning approaches to predicting whether a metal detector will or will not be present in a US school. All three of these projects are ongoing, but thus far the clients have been very pleased with the results.
	Machine Learning Intern, Scyfer (acquired by Qualcomm) Feb-Sep 2017 Interned at Scyfer, a machine learning and artificial intelligence consultancy, spun off from the University of Amsterdam. My work here formed the thesis component of my masters' degree, which focused on researching and developing semi-supervised (deep) learning methods. The quality of my work and knowledge shared led to praise from across the team, and improved outcomes for Scyfer's customers.
	Econometrics Contractor, LEK Consulting 2016-2017 Contracted by consulting firm LEK to deliver demand forecasting models and associated research and data analysis for two toll roads in the Sydney region. Was responsible for most aspects of the project, which involved the development of a bespoke Bayesian ARIMA-style model. Was additionally responsible for planning and scheduling aspects of the project, plus maintaining the client relationship and providing progress updates. The client was pleased with the robust forecasting model and analysis that resulted, which were delivered on time and within LEK's allocated budget.

Economics Consultant, **PricewaterhouseCoopers** 2013-2017
 Worked with Pricewaterhouse Coopers' (PwC) Sydney-based Economics & Policy consulting team. Primary focus was on economic and econometric modelling, and associated analysis and reporting. Projects saw me develop multinomial logit models of transport mode choice, interface with PwCs SQL-based small area economic and demographic model to produce regional forecasts of economic indicators, and specify and estimate ARIMAX models of toll road usage.
 The consistent value I brought to projects at PwC saw me continue to assist the team remotely while I completed my masters' degree in Amsterdam.

Data Entry Clerk / Software Developer, **Law in Order Pty Ltd** 2010-2013
 Worked in a team tagging and labeling documents to produce electronic databases of evidence used by law firms. Additionally spent several months developing and maintaining an Access VBA/SQL-based software tool which enabled better identification of inconsistencies in database outputs. This tool has led to improved quality assurance practices and outcomes for the firm.

Research Assistant, **Saki Partners Pty Ltd** 2012-2013
 Assisted Dr. Nigel Finch, academic director of the CEMS and Master of Management programs at the University of Sydney, with research and data analysis for future publications.

Research Assistant, **The University of Western Sydney** 2012-2013
 Supported the Family and Community Health Research Group with literature reviews, data entry and analysis, and interview transcriptions, assisting them to complete projects and research.

Technical Assistant, **Switch Automation Pty Ltd** 2009-2010
 Assisted with the development of Switch's automation solutions through documentation and website maintenance, software testing/development, and manufacture and administrative duties, augmenting its ability to grow and meet customer needs.

OTHER ACHIEVEMENTS

- Ongoing: Maintain a blog with posts on machine learning at nlml.github.io
- Ongoing: Have provided solutions to several questions as user nlml on Stack-Overflow and at stats.stackexchange.com
- 2018: Participated in the Kaggle TensorFlow Speech Recognition Challenge (only placed 186th out of 1100 participants, but tried some interesting ideas)
- 2017: Graduated *Cum Laude* from the MSc Artificial Intelligence program at the University of Amsterdam
- 2017: Received an 8/10 for my MSc AI thesis: *Semi-Supervised Learning with Generative Adversarial Networks*, supervised by Prof. Dr. Max Welling and Taco S. Cohen
- 2016: Placed 1st out of approximately 50 student groups in a Kaggle-style machine learning competition as part of the UvA/VU course *Data Mining Techniques*
- 2015: Placed 17th out of 985 participants in Kaggle's *Facebook Recruiting IV: Human or Robot?* data science competition
- 2013: Placed 2nd out of 108 students in the *Operations Management* course at the University of Sydney
- 2010: Awarded two separate International Exchange Scholarships by the University of Sydney, based on academic merit

SKILLS AND STRENGTHS

- 2008: Placed 7th of 2730 students in Higher School Certificate course *Software Design and Development*.

- Broad knowledge in fields relating to machine learning, statistics, computer science and economics, obtained both academically and through practice
- Excellent writing skills; able to simplify and concisely convey ideas to diverse audiences
- Great verbal communication skills; thrive in a team environment.

Programming languages/software experience:

- Expert in Python and its data science stack (numpy, sklearn, pandas, matplotlib, etc.)
- Very experienced with modern deep learning libraries (namely, Pytorch, TensorFlow, Theano)
- Strong experience with Unix/Linux/ubuntu
- Strong experience working with and developing a deep/machine learning model deployment stack using Docker, Cassandra, PostgreSQL, RabbitMQ, RethinkDB, Redis
- Expert in R, VBA, Matlab, SQL, \LaTeX
- Intermediate in Java, C++, SAS, Stata
- Experience with HTML, CSS, JavaScript
- Data and geospatial visualisation abilities in Tableau and Quantum GIS (QGIS)
- Expert in Microsoft Office; have developed large, advanced models in Excel.