DEVIN TAYLOR

Machine Learning Engineer

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EDUCATION

University of Cambridge
Master of Philosophy Advanced Computer Science

♀ Cambridge, United Kingdom 📅 Nov 2018 – July 2019

- **Grade:** Distinction
- **Dissertation:** Hierarchical multi-head co-attention for interpretable cross-modal deep learning
- **Subjects:** Machine learning, probabilistic machine learning, large scale data processing and optimisation, advanced topics in mobile and sensor systems, mobile robot systems

University of the Witwatersrand
Bachelor of Science Engineering (Electrical)

♀ Johannesburg, South Africa 📅 Jan 2015 – Dec 2016

- **Dissertation:** Accelerometer-based modulated artificial horizon system for countering motion sickness

University of the Witwatersrand
Bachelor of Engineering Science Biomedical Engineering

♀ Johannesburg, South Africa 📅 Jan 2012 – Dec 2014

RESEARCH EXPERIENCE

Refereed workshop publications

- **Taylor, D.**, Spasov, S., Liò, P., "Co-Attentive Cross-Modal Deep Learning for Medical Evidence Synthesis and Decision Making". In machine learning for health workshop, NeurIPS, Vancouver, Canada (2019).

Organising

- **Conferences:** IndabaX South Africa 2020
- **Tutorials:** Deep Learning Indaba Kenya 2019
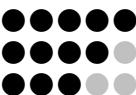
Reviewing

- **Workshops:** ML4H (NeurIPS) 2019, ML4H (NeurIPS) 2020
- **Conferences:** ACM CHIL 2020

HONORS & AWARDS

- MIT Press poster award, Deep Learning Indaba (2019)
- Nedbank Masters Scholarship (2018)
- Most Innovative Honours Project Award (2016)
- Represented University of the Witwatersrand at the SAIEE national student project competition (2016)
- Entelect award for best Software Development II project (2015)
- Dean's list (2014, 2013)

SKILLS

Python, C++, R, PyTorch, Tensorflow
Go, Matlab, SQL
Assembly, Julia

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WORK EXPERIENCE

Nedbank CIB
Software Engineer

♀ Johannesburg, South Africa 📅 Aug 2019 – *present*

- Lead engineer in markets and trading. Responsible for building the C++ back-end for an algorithmic trading platform and implementing different algorithmic trading models.

Isazi
Machine Learning Researcher (part-time)

♀ Remote 📅 June 2020 – *present*

- Machine learning research for time series forecasting in the fast moving consumer goods sector.

Data Scientist

♀ Johannesburg, South Africa 📅 Dec 2016 – Sep 2018

- Led a team of four in developing a web-based, GCP hosted, machine learning product to extract structured data from unstructured images. Responsibilities included developing the Python back-end, implementing core machine learning algorithms, engaging with key stakeholders, project management, and managing the deployment at three clients. Data capturing efficiencies were improved by up to 84%.
- Machine learning research lead and industry supervisor for four students in MS in Data Science at the University of San Francisco. Research focused on two projects: CNNs for diagnosing paediatric patient x-rays, and autoencoders for biomarker identification in breast cancer genetic data.
- Data science consultant focused on improving client retention for a client in the insurance sector. Responsibilities included building machine learning models in R and managing result communication to client.

Data Scientist (part-time)

♀ Johannesburg, South Africa 📅 Dec 2015 – Nov 2016

- Implemented Python back-end of system used to track advertisements on radio stations, including a custom audio fingerprinting algorithm. System was distributed across clusters of Raspberry Pis.

Aerial Monitoring Solutions
Software Engineer Intern

♀ Johannesburg, South Africa 📅 June 2015 – July 2015

- Built application for controlling a drone using C# and XML.

PROJECTS

- **MultiAug** - Python base multimodal data augmentation library used in training multimodal machine learning models.
- **CNN uncertainty** - add uncertainty estimations to CNN predictions with Gaussian processes using PyTorch and GPyTorch.
- **Web client, server, proxy** - multithreaded Go web client, server, and proxy supporting both TCP and UDP protocols.