ADAM GOODGE

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EMPLOYMENT

Agency for Science, Technology and Research (A*STAR) (2022-Present)

Scientist, Institute for Infocomm Research (I2R)

EDUCATION

National University of Singapore (NUS) (2018-2022)

I completed my PhD in Computer Science at the School of Computing, NUS. I was awarded the SINGA scholarship from the Agency for Science, Technology and Research (A*STAR), Singapore.

- **Dissertation Title:** "Robust and Adaptive Anomaly Detection with Deep Learning"
- **GPA**: 4.42/5.00
- **Classes**: Neural Networks and Deep Learning | Advanced Topics in Machine Learning | Advanced Algorithms | Logic in Artificial Intelligence | The Art of Computer Science Research | Theory and Algorithms in Machine Learning
- **Conference Publications:**
  - "Robustness of Autoencoders for Anomaly Detection Under Adversarial Impact", International Joint Conference on Artificial Intelligence (IJCAI) 2020
  - "LUNAR: Unifying Local Outlier Detection Methods via Graph Neural Networks AAAI Conference on Artificial Intelligence (AAAI) 2022
  - "CADET: Calibrated Anomaly Detection for Mitigating Hardness Bias, International Joint Conference on Artificial Intelligence (IJCAI) 2022
  - "ARES: Locally Adaptive Reconstruction-based Anomaly Scoring", European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD) 2022
- **Awards**:
  - Dean's Graduate Research Excellence Award with $1000 cash prize (2022)
  - Amazon Science scholarship award for free registration for AAAI2022 (2022)
- **Research interests:** Anomaly detection, unsupervised learning, machine learning, graph neural networks

University of Nottingham, United Kingdom (2017-2018)

I completed a PGDip in Efficient Fossil Energy Technology (*Distinction*)

- A rigorous postgraduate diploma programme to develop technical and professional skills for the energy sector
- **Classes**: Scientific Computing and C++ | Data Modelling | Computational Fluid Dynamics | Power Generation and Carbon Capture | Energy Systems | Research Skills & Commercialisation

University of Birmingham, United Kingdom (2013-2017)

I completed an integrated Master's program (MSci) in Natural Sciences, with my major subject as Mathematics (*First Class*)

- Masters project in mathematical modelling and computational fluid dynamics
- **Mathematics classes**: Advanced Numerical Methods | Differential Equations | Continuum Mechanics | Integer & Linear Programming | Combinatorial Optimisation | Probability and Statistics | Linear Algebra | Mathematical Finance | Real and Complex Analysis | Multivariate and Vector Analysis
- **Other classes**: Earth and Ecological Systems | Sustainable Development | Hydro-climatology | Environmental Management | Micrometeorology
- **Awards**:
    - 'Distinction Prize': deemed 'worthy of distinction' by the Board of Examiners (2016)
    - 'Senior Tutor's Prize': the top student of the cohort over the first two years (2015)
    - 'Personal Skills Award': demonstrating desirable skills such as strong leadership, teamwork, and communication (2015)
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SKILLS & EXPERIENCE

Computational Skills

- Extensive experience with Python and key libraries for machine learning: Numpy, Pandas, Scikit-learn, Keras, PyTorch and Tensorflow
- Experience with C++, R, SQL and MATLAB
- Microsoft Office and LaTeX proficient

Experience

- Presented my first-author publications at their respective conferences globally
- 2022: Program Committee member for the Main Track of AAAI23
- 2020: Teaching assistant for 'Knowledge Discovery and Data Mining' Masters course at NUS and general mentoring of master students
- 2019-2020: A*STAR SINGA Ambassador: organising events, social media presence and communications with prospective scholars on behalf of the SINGA programme
- 2016-2017: Elected student representative of Japanese class, liaising with students and staff to address issues and improve the programme
- 2015: Work experience in the Pricing Analysis team at Admiral Insurance UK, investigating and analysing competitor pricing techniques
- 2013: 'Maths Leaders Challenge': developing and conducting mathematics lessons for struggling GCSE students

Additional Information

- A British citizen living in Singapore since 2018
- A member of the Pattern Recognition and Machine Intelligence Association