

# Adam McMillan

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**AI — Machine Learning — Software Engineering — Psychology — Music**

Adam is a current Master of Information Technology student at the University of Melbourne, undertaking specialization in Artificial Intelligence. He has a keen interest in software development, machine learning, and AI, and enjoys solving real-world problems with creative, thoughtful solutions. His studies so far have led him to develop an excellent foundation in programming, algorithms, databases, AI/ML, internet architecture and cloud computing. His background in psychology and cognitive-behavioural neuroscience provides him with a unique perspective, allowing him to solve problems with a scientific, yet human-centred approach. Outside of tech, Adam is a passionate classical pianist, performing and teaching regularly around Melbourne.

## Technical Skills

- **Programming Languages:** Python, C++, Java, JavaScript, Prolog, Haskell, React, GLSL
- **Machine Learning:** Supervised learning (classification, regression, linear & non-linear models) and unsupervised learning (clustering), model evaluation
- **AI Planning:** Search algorithms, heuristics, classical planning, MDPs, reinforcement learning, game theory
- **Libraries/Frameworks:** Scikit-learn, Pandas, Numpy, TensorFlow, Keras, PyTorch
- **Database Management:** Modelling and implementing relational and non-relational databases
- **Cloud/Cluster:** Kubernetes, Docker, Elastic, Fission, MPI, HPC
- **Collaboration:** Jira, GitHub

## Experience

### **Freelance Web Developer – Self (2014 – Present)**

Building full-stack websites for clients using a variety of web technologies as well as providing SEO optimisations.

### **Staff Accompanist – University of Melbourne (2023 – Present)**

Providing piano accompaniment for students of the University of Melbourne for recitals and performance classes.

### **Piano Instructor – Self (2011 – Present)**

Private piano teaching, in my own studio as well as for schools such as Melbourne Grammar School, Parkville Music School, and Kensington Primary School. Supported many students in achieving competition and exam success.

## Education

### **Master of Information Technology (Artificial Intelligence)**

University of Melbourne

2024 – present (expected completion: mid 2026)

### **Bachelor of Psychology (Honours)**

Deakin University, Cognitive Neuroscience Unit

Class I Honours

2019 – 2023

### **Bachelor of Music (Honours)**

Griffith University, Queensland Conservatorium of Music

Class I Honours

2011 – 2014

## Clubs/Associations

### **Computing and Information Systems Students Association (CISSA)**

University of Melbourne

### **Competitive Programming Club**

University of Melbourne

### **Australian Computing Society (Student Member)**

Australian Computing Society

## Awards

- Deakin Scholarship for Excellence (Deakin University)
- Sir Samuel Griffith Scholarship (Griffith University)
- University Medal (Griffith University)
- 1st Prize, Great Romantics Competition (Melbourne Recital Centre)
- 1st Prize, Queensland Piano Competition

## Research

### **Exploring the role of motor imagery in disordered movement in children with ADHD**

Honours project at Cognitive Neuroscience Unit, Deakin University, 2023

### **Perfectionism in classical pianists: An exploration of how it manifests itself and possible coping strategies**

Honours project at Queensland Conservatorium, Griffith University 2014