Daniel Filan – Curriculum Vitæ

AREAS OF INTEREST

AI Safety (Value Alignment, Corrigibility, Transparency, Logical Uncertainty), Theory of Artificial Intelligence (Reinforcement Learning, Algorithmic Information Theory, Statistical Machine Learning).

DEGREE

Bachelor of Philosophy (Hons), 2012 – 2015
Australian National University

- Honours in Computer Science, undergraduate studies in Mathematics and Physics
- Thesis: "Resource-bounded Complexity-based Priors for Agents", supervised by Marcus Hutter
- GPA: 7.00/7.00, 1st Class Honours

SELECTED AWARDS

University Medal, Australian National University 2015

- Prize; awarded to students who have obtained First Class Honours (or Masters Advanced Equivalent) and demonstrated exceptional academic excellence across their studies, the highest academic prize for undergraduates.

Erin Brent Computer Science Prize, Australian National University 2015

- Monetary prize; awarded to the student who in that year was enrolled in a program leading to the award of a degree of Bachelor with Honours in the ANU College of Engineering and Computer Science; and achieved the best Honours result in any of the degree programs relating to Computer Science, Software Engineering or Information Technology.

National Merit Scholarship, Australian National University 2012 – 2015

- Annual funding; awarded to the top $\sim 0.5\%$ of school leavers.

Hanna Neumann Prize for Second Year Mathematics, 2013
Australian National University

- Monetary prize; awarded to the top student in second year mathematics courses.

Dean's Commendation List, Australian National University 2012

- Prize; awarded to students who achieve scores of 90 or above in all science courses in a particular year.

RESEARCH EXPERIENCE

Summer Research Scholar Summer 2013–2014
ANU Mathematical Sciences Institute

- An investigation into the theory and practice of measure-theoretic image packing.

Undergraduate Research Projects 2013, 2014
ANU Research School of Computer Science

- Extreme state aggregation beyond MDPs: Tightness of FRL bounds.

Department of Quantum Sciences, ANU Research School of Physics and Engineering

- Proofs of impossibility theorems regarding tests of oneself being in superposition.
- An investigation into the self-gravitation of light in general relativity.

PUBLICATIONS

- Loss Bounds and Time Complexity for Speed Priors. With Jan Leike and Marcus Hutter. AISTATS 2016.
- Self-modification of Policy and Utility Function in Rational Agents. With Tom Everitt (lead author), Mayank Daswani, and Marcus Hutter. AGI 2016, recipient of Kurzweil Prize for Best Paper.

NON-DEGREE PROGRAMS

AMSI Summer School in the Mathematical Sciences, January 2014
Mathematical Sciences Institute, Australian National University

- Introduction to Conformal Field Theory and String Theory for Mathematicians, 4 week course.

TEACHING EXPERIENCE

Teaching Assistant, MATH2322 Advanced Algebra 1 Semester 2 2015
ANU Mathematical Sciences Institute

Teaching Assistant, MATH2320 Advanced Analysis 1 Semester 1 2015
ANU Mathematical Sciences Institute

Teaching Assistant, COMP2610 Information Theory Semester 2 2014
ANU Research School of Computer Science