# AREAS OF INTEREST

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

### **DEGREES**

University of California, Berkeley • Studying AI safety, supervised by Stuart Russell.

Doctor of Philosophy in Computer Science,

2012 - 2015

2016 - present

Bachelor of Philosophy (Hons), Australian National University

• Honours in Computer Science, undergraduate studies in Mathematics and Physics.

- Thesis: "Resource-bounded Complexity-based Priors for Agents", supervised by
- GPA: 7.00/7.00, 1st Class Honours.

### **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.

## **SELECTED AWARDS**

University Medal, Australian National University

2015

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

• Monetary prize; awarded to the student who 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

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

#### **INTERNSHIPS**

Future of Humanity Institute, Oxford University

2016

• Writing code for agentmodels.org, a website designed to explain the use of probabilistic programs to build models of agents and perform inference about them.

## **UNDERGRAD** RESEARCH

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.

# TEACHING EXPERIENCE

Teaching Assistant, MATH2322 Advanced Algebra 1 ANU Mathematical Sciences Institute	Semester 2 2015
Teaching Assistant, MATH2320 Advanced Analysis 1 ANU Mathematical Sciences Institute	Semester 1 2015
Teaching Assistant, COMP2610 Information Theory ANU Research School of Computer Science	Semester 2 2014