Aidan Scannell

PhD Candidate at Bristol Robotics Lab

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aidanscannell

Whilst completing my degree I developed a keen interest in mathematics, programming and robotics and became fascinated by how they form a common connection between humans and the surrounding world. I am now pursuing a PhD investigating methods for learning both data efficiently and safely onboard physical robotic systems. I am particularly interested in using probabilistic models for learning dynamics models and their integration into model-based reinforcement learning algorithms.

SKILLS

Machine Learning: python, numpy, tensorflow

Robotics: java, c++, ros, opencv

Engineering: matlab, simulink, autodesk inventor, solidworks, msc patran

Project: github, overleaf/latex

Web: html, css, javascript, php, sql

JavaScript: node, react

WORK EXPERIENCE (3)

Hourly Paid Teacher at University of Bristol September 2018- Current

Alongside my PhD studies I am a teaching assistant for the following courses:

- Machine Learning COMS30007 - https://bit.ly/2C6UbKp
- Robotic Systems COMSM0012 - https://bit.ly/2LV7rpZ
- Intelligent Software Systems

PhD Researcher at Bristol Robotics Lab September 2017- Current

Researching methods for learning both data efficiently and safely onboard physical robotic systems. In particular, investigating learning probabilistic dynamics models to reduce the impact of model errors and their integration with control techniques to provide safety guarantees within a model-based reinforcement learning framework. EPSRC Centre for Doctoral Training in Future Autonomous and Robotic Systems (FARSCOPE).

- Model-based reinforcement learning
- Probabilistic Modelling
- Bayesian inference
- Optimal control
- System identification

Mechanical Engineering Intern at Mott MacDonald June 2015- August 2015

- Developed teamwork skills, learning the importance of knowledge management within a team.
- Overcame logistical issues and improved a system's efficiency, resulting in the design's approval.
- Consistently met deadlines whilst working under pressure.
- Conducted a feasibility study and estimated project costs that informed subsequent action.
- Located an error and proposed a solution. Communicating this to relevant managers resulted in its successful implementation.
- Mott MacDonald offered me future employment following my summer placement.

VOLUNTEER

STEM Ambassador at STEM Learning
January 2018 - Current
https://www.stem.org.uk/stem-ambassadors

I volunteer as a STEM ambassador, offering my time and enthusiasm through engagement with children both inside and outside of the classroom.

Club Leader at Code Club
December 2017 - April 2018
https://codeclub.org/en/

I collaborated with Code Club and Bristol Libraries to set up and run a Code Club for young people aged 9-13 at Junction 3 Library in Easton, Bristol.

Technical Lead (Drivetrain) at Formula Student, University of Bristol
January 2015 - January 2016
https://www.beracing.co.uk/

Each year, as part of Formula Student, students design, build and race an open-wheel race car at Silverstone.

- Finished 2nd in the National Class 2 competition in 2013/2014, I was then selected as the Drivetrain lead.
- This role improved my communication skills as I was be leading weekly presentations.
- I developed my leadership skills through setting realistic objectives, effectively allocating work to the appropriate team members and monitoring outcomes.

Snowboard Captain at Snowsports Club, University of Bristol
January 2014 - January 2015
http://www.ubsc.co.uk/

add summary here

- Organised multiple weekly training sessions, demonstrating my ability to plan and run events smoothly.
- Negotiated competitive prices for a growing member base within an inherently expensive sport.
- Responsible for aiding the smooth running of the club and helping to organise the annual university ski trip, with circa 1500 participants, working under pressure to manage people in high stress situations.
- Awarded the 'Team of the Year' award and full colours for my performances and contributions to the sport.

Shop Assistant at Help the Aged
January 2009 - January 2011
https://www.ageuk.org.uk/

Helping in the shop was rewarding and I developed my sales skills and an understanding of customer service.

EDUCATION (3)

MRes Robotics and Autonomous Systems at University of Bristol
2017 - 2018

amazon picking challenge - 64% | artificial intelligence with logic programming - 73% | bio-inspired artificial intelligence - 91% | master's dissertation - 77% | machine learning - 78% | robotic fundamentals - 80% | robotics research preperation - 69% | technology and context of robotics and autonomous systems - 67% | uncertainty modelling for intelligent systems - 68%

Grade: 73%

Extending BDI Agents to Model and Reason with Uncertainty (77%) - https://github.com/aidanscannell/uncertain-agentspeak

MEng Mechanical Engineering at University of Bristol
2012 - 2016

robotic systems - 87% | generic propulsion - 76% | nonlinear structural dynamics - 75% | acoustics - fundamentals and applications - 84% | ultrasonic non-destructive testing - 77% | systems and control engineering 4 - 72% | non-linear behaviour of materials - 57% | virtual product development - 74%

Grade: 73%

Graduated in the top 10% of cohort.

A-Levels at Ripon Grammar School
2005 - 2012

chemistry - a* | mathematics - a* | physics - a*

AWARDS

Starting to Teach at University of Bristol
2018

Full Sporting Colours at University of Bristol
2017

Awarded full sporting colours for outstanding achievement in snowboarding.

The Bristol PLUS Award at University of Bristol
2016

The Duke of Edinburgh's Award (Bronze/Silver/Gold) at Ripon Grammar School
2012

Mary Jones prize for Mathematics at Ripon Grammar School
2012

Gold Crest Award at British Science Association
2012

Achieved through completion of the engineering education scheme.

Nissan Rose Bowl at Engineering Education Scheme
2012

Awarded the Nissan Rose Bowl for the best team at the North Regional Assessment Day.