

Matthew Angus

Curriculum Vitae

I am an enthusiastic and hardworking person who has been responsible for developing innovative technologies in both my academic and professional work. I am interested in developing new, exciting, or even radical ideas that have the potential to shape the future of how people interact with technology.

Education

- Sept '16 – **Master of Mathematics in Computer Science**, *The University of Waterloo*.
Present
 - Semantic segmentation for scene understanding.
 - Wrote custom TensorFlow operation with CUDA GPU implementation.
 - Multiple courses and course projects in machine learning.
- Sept '11 – **Bachelor of Science in Computer Science**, *The University of Calgary*, Concentration in Algorithms and Complexity Theory, Minor in Pure Mathematics.
April '16
 - Sought out Dr. Rob Kremer to collaboratively research ontology inference for a semantic knowledgebase where I decreased the runtime of our inference algorithm by 97% to achieve a runtime in $O(x^n)$.
 - Two semester exchange at the University of Western Australia where I was able to grow personally, academically and culturally by studying and travelling in Australia and surrounding countries.

Work Experience

- May '18 – **Research Engineer Intern**, NXP SEMICONDUCTORS, Ottawa.
Present
 - Extended state of the art world models for autonomous driving.
 - Implemented and trained deep learning models, such as variational auto-encoders and RNNs, in TensorFlow using the Carla driving simulator.
 - Researched independently, providing key milestones to co-workers.
- Jan '15 – **Application Developer**, CANADIAN NATURAL RESOURCES LIMITED, Calgary.
Aug '16
 - Consulted on architecting the data and business layers of a responsibility management system that tracked responsibilities globally, that extracted a hierarchy from a relational database.
 - Helped translate internal customer requirements into action items for our development team.
 - Championed and implemented bug tracking best practices across our development team, previously there was none.
- May '12 – **Security Analyst**, CANADIAN NATURAL RESOURCES LIMITED, Calgary.
Dec '13
 - Created small scripts to replace manual tasks saving our team many hours on a weekly basis.
 - Worked within our company's workflow to deliver access to various applications.
 - Helped external vendors manage access to our environment through FTP.
 - Removed application and network access for employees that had left the company.

Awards and Competitions

- 2016 Math Domestic Graduate Student Award
- 2016 Graduate Research Studentship Award
- 2016 University of Calgary Faculty of Science Dean's List
- 2016 Intelligent Ground Vehicle Competition Rookie of the Year
- 2016 Intelligent Ground Vehicle Competition 8th Place, out of 24
- 2016 IEEE Sumobots Competition

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📄 mattangus.github.io

- 2015 Alberta Collegiate Programming Contest
- 2015 IEEE Minibots Competition
- 2013 International Studentship Competition Award
- 2012 Alberta Collegiate Programming Contest

Technical skills

- Basic \LaTeX , HASKELL
- Intermediate C++, Test Driven Development, Git, OpenCV, Linux, CUDA
- Advanced JAVA, TensorFlow, PYTHON, MATLAB, SQL, C#

Co-Curricular Activities

- 2013 – 2016 **Lead Software Developer**, *Autonomous Robotics Club*, The University of Calgary.
 - Architected and implemented over 50% of the core system including the real-time image processor for vehicle navigation.
 - Integrated a fuzzy logic controller with our systems data streams (GPS, Lidar, IMU) for real time decision making.
- 2013 – 2016 **Club Executive**, *Autonomous Robotics Club*, The University of Calgary.
 - Co-managed ARC where I helped managed our budget and recruitment on campus.
 - Worked on a community outreach program to present our robot to middle school students to help gain interest in robotics and computer science.
 - Organized and managed ARC's first entry into the Intelligent Ground Vehicle Competition.
- 2012 – 2013 **Software Developer**, *Autonomous Robotics Club*, The University of Calgary.
 - Experimented with various motion planning algorithms such as A* search based motion planner and the distance transform to find open space.
- 2012 – 2013 **Club Member**, *Problem Solving Club*, The University of Calgary.
 - Analyzed small problems sets to learn when to use various data structures and algorithms.

Interests

- Rock Climbing
- Hiking
- Snowboarding
- Raspberry Pi