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 – Present **Master of Mathematics in Computer Science**, *The University of Waterloo*.
- Semantic segmentation for scene understanding.
- Wrote custom TensorFlow operation with CUDA GPU implementation.
- Multiple courses and course projects in machine learning.

Sept '11 – April '16 **Bachelor of Science in Computer Science**, *The University of Calgary*, Concentration in Algorithms and Complexity Theory, Minor in Pure Mathematics.
- 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 – Present **Research Engineer**, NXP Semiconductors, Ottawa.
- 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 – Aug '16 **Application Developer**, Canadian Natural Resources Limited, Calgary.
- 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 – Dec '13 **Security Analyst**, Canadian Natural Resources Limited, Calgary.
- 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

Unit 6, 34 Bridgeport Road East – Waterloo, Ontario N2J 2J5
℘ *+ 1 (403) 973 8314* • ✉ *m2angus@gsd.uwaterloo.ca*
✆ *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
- Snowboarding
- Hiking
- Raspberry Pi