BAO XIN CHEN

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Country of Citizenship: Canada

EDUCATION

York University, Toronto, ON
M.S. in Computer Science **2019**
Focus on Robot Vision
Computer Science & Engineering Outstanding Thesis award
CGPA: 3.8 / 4.0

University of Toronto, Toronto, ON
B.S. Honors in Computer Science **2016**
Focus on Artificial Intelligence (Machine Learning & Computer Vision)
With High Distinction
CGPA: 3.84 / 4.0

AWARDS

Computer Science & Engineering Outstanding Thesis award, York University	**2020**
QEII-GSST, York University (CAD $15,000/yr, I rejected)	**2018 & 2019**
Best Paper Finalist, ICVS 2017, Shenzhen, China	**2017**
Best Robotics Paper, CRV 2017, Edmonton, Canada	**2017**
Lassonde Graduate Entrance Scholarship, York University (CAD $8,000)	**2016 – 2017**
Masters Domestic Funding, York University (CAD $41,666)	**2016 – 2018**
Graduated with High Distinction, University of Toronto	**2016**
Norma Brock award, University of Toronto, Woodsworth College (CAD $1,500/yr)	**2014 & 2015**
Dean's List, University of Toronto	**2013 – 2016**
Ontario Principal's Award	**2012**

EMPLOYMENT

NuPort Robotics, Toronto, ON
Chief Technology Officer (an Autonomous Driving Trucks startup) **2019 – Present**

Department of Engineering and Computer Science, York University, Toronto, ON
Teaching Assistant **2016 – 2019**

Department of Engineering and Computer Science, York University, Toronto, ON
Research Assistant **2016 – 2019**
Supervisor: Professor John K. Tsotsos

Department of Computer Science, University of Toronto, Toronto, ON
Teaching Assistant **2015 – 2016**

IBM, Toronto, ON
Software Developer **2014 – 2015**

TEACHING EXPERIENCE

York University, Toronto, ON
Teaching Assistant – in "Web Programming" (Undergraduate) **2018-2019**
Met with students in weekly labs and prepared lab slides. As well as, graded written work.

York University, Toronto, ON
Teaching Assistant – to Professor Jarek Gryz in "Introduction to Database Management Systems" (Undergraduate) **2017-2018**
Provided office hours and graded programming projects.

York University, Toronto, ON
Teaching Assistant – to Professor Uyen Trang Nguyen in "Software Tools (C language)" (Undergraduate) **2017**
Met with students in weekly labs and graded written work.

University of Toronto, Toronto, ON
Teaching Assistant – in "Computer Organization (Verilog)" (Undergraduate) **2016**
Met with students in weekly labs and graded written work, including final exam papers.

University of Toronto, Toronto, ON
Teaching Assistant – to Professor Eric Hehner in "Formal Methods in Software Design" (Undergraduate and Graduate) **2015**
Met with students in weekly tutorials and graded written work.

PUBLICATIONS AND PAPERS

1. **Bao Xin Chen**
   "Real-time Online Human Tracking with a Stereo Camera for Person-Following Robots"
   Committee: Prof. John K. Tsostso, Prof. Michael Brown, and Prof. George Z.H. Zhu
   Master's thesis, 2019 (Computer Science & Engineering **Outstanding Thesis award**)

2. **Bao Xin Chen** and John K. Tsotsos
   "Fast Visual Object Tracking using Ellipse Fitting for Rotated Bounding Boxes"
   in International Conference on Computer Vision (ICCV) Workshop, IEEE, 2019.

3. Xing Zhao, Manos Papagelis, Aijun An, **Bao Xin Chen**, Junfeng Liu, and Yonggang Hu
   "Elastic Bulk Synchronous Parallel for Distributed Deep Learning"
   in 19th International Conference on Data Mining (ICDM), IEEE, 2019. (**Oral**)

4. Xing Zhao, Aijun An, Junfeng Liu, and **Bao Xin Chen**
   "Dynamic Stale Synchronous Parallel Distributed Training for Deep Learning"
   in 39th International Conference on Distributed Computing Systems (ICDCS), IEEE, 2019, pp. 1508-1517. (**Oral**)

5. **Bao Xin Chen**, Raghavender Sahdev, Dekun Wu, Xing Zhao, Manos Papagelis, and John K. Tsotsos

"Scene Classification in Indoor Environments for Robots using Word Embeddings"
In International Conference on Robotics and Automation (ICRA) Workshop, IEEE, 2018.

6. Raghavender Sahdev, **Bao Xin Chen**, and John K. Tsotsos
"Indoor Localization in Dynamic Human Environments using Visual Odometry and Global Pose Refinement"
in Computer and Robot Vision (CRV), 2018 15th Conference on, IEEE, 2018, pp. 360-367.

7. **Bao Xin Chen***, Raghavender Sahdev*, and John K. Tsotsos
"Integrating Stereo Vision with a CNN Tracker for a Person-Following Robot"
in 11th International Conference on Computer Vision Systems (ICVS), Springer, 2017, pp. 300-313. (**Oral) (Best Paper Finalist**)

8. **Bao Xin Chen***, Raghavender Sahdev*, and John K. Tsotsos
"Person Following Robot Using Selected Online Ada-Boosting with Stereo Camera"
in Computer and Robot Vision (CRV), 2017 14th Conference on, IEEE, 2017, pp. 48-55. (**Oral) (Best Robotics Paper**)

* denote as equal contribution

COURSES

Machine Learning:			
Machine Learning and Data Mining	Undergrad 4th yr	A+	Prof. Raquel Urtasun
Probabilistic Learning and Reasoning	Undergrad 4th yr	A+	Prof. Richard Zemel
Neural Networks and Machine Learning	Undergrad 3rd yr	A+	Mr. Michael Guerzhoy
Computer Vision:			
Introduction to Visual Computing	Undergrad 3rd yr	A+	Mr. Michael Guerzhoy
Introduction to Image Understanding	Undergrad 4th yr	A+ (**Top 1**)	Prof. Sanja Fidler
Artificial Intelligence:			
Introduction to Artificial Intelligence	Undergrad 3rd yr	A	Prof. Fahiem Bacchus
Embodied Intelligence	Grad 2nd yr	A	Prof. John K. Tsotsos
Robotic:			
Introduction to Robotics	Grad 1st yr	A+	Prof. Burton Ma
Others:			
Data Analysis and Visualization	Grad 2nd yr	A	Prof. Manos Papagelis
Formal Methods in Software Design	Undergrad 4th yr	A+ (**Top 1**)	Prof. Eric Hehner
Introduction to Computer Networks	Undergrad 3rd yr	A+	Prof. Peter Marbach
Computer Networks	Undergrad 4th yr	A+	Prof. Yashar Ganjali

TECHNICAL SKILLS

Programming: C, C++, Shell, Python, Java, JavaScript

Machine Learning Tools: Pytorch, Tensorflow

Computer Vision Tools: OpenCV

Robotics: ROS, Nvidia Drive AGX

Data Analysis: MATLAB

The most frequent IED: Notepad++ on Windows, Kate on Ubuntu