

# Eu Wern Teh

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## Summary

I am a Ph.D. student in the School of Engineering at the University of Guelph where I am advised by Prof. Graham Taylor. I received both of my M.Sc. and B.Sc. degree in Computer Science from the University of Manitoba. My research is focused on Deep Learning and its applications in Computer Vision.

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## Experience

### Machine Learning Group, School of Engineering

UNIVERSITY OF GUELPH, GUELPH, CANADA

#### Graduate Research Assistant

Sep '17 – present

Researching deep learning techniques to solve various computer vision tasks. (e.g., content-based image search, metric learning, few-shot learning, semi-supervised learning, active learning, transfer learning, and data augmentation.)

### Computer Vision Lab

UNIVERSITY OF MANITOBA, WINNIPEG, CANADA

#### Graduate Research Assistant

Sep '15 – Sep '17

I have researched on deep learning techniques to solve object detection. My thesis is about solving weakly supervised object detection via an attention-based network. Besides, I also worked on domain adaptation and transfer learning from image to video dataset for weakly supervised object detection.

### Johnston Group

WINNIPEG, MANITOBA, CANADA

#### Application Developer

Jul '11 – Sep '15

I have developed and maintained applications for a few core systems in the company: a) Billing inquiry System b) Insurance administrative system c) Advisor sales and projection system and d) Insurance quoting system

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## Education

### University of Guelph

GUELPH, ONTARIO, CANADA

Ph.D. in Engineering

2017 – present

Courses: Introduction to Machine Learning, Deep Learning, Machine Vision, Computational Statistics

### University of Manitoba

WINNIPEG, MANITOBA, CANADA

M.Sc. in Computer Science, CGPA: 4.2 / 4.5

2015 – 2017

Thesis: *Weakly Supervised Object Localization Using Attention-based Neural Networks.*

Courses: Probabilistic Graphical Models, Computational Perception & Cognition, Parallel Computing, Graph Drawing, Research Methodologies.

### University of Manitoba

WINNIPEG, MANITOBA, CANADA

B.Sc. in Computer Science & Engineering, CGPA: 3.71 / 4.5

2006 – 2011

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## Skills

**Research expertise:** Deep Learning, Computer Vision, Convolutional Neural Network (CNN), Recurrent Neural Network (RNN), Attention based Networks, Machine Learning, Metric Learning, Few-Shot Learning, Zero-Shot Image Retrieval

**Deep Learning/Machine Learning Framework:** Torch, PyTorch, TensorFlow, Caffe, MatconvNet, Scikit-learn, libsvm

**Technical expertise:** C++, Python, Matlab, Lua, C, R, PHP, C#, Java, JavaScript, SQL, RPGLE, CLLE

**Others:** Slurm, Linux, Eclipse, Tmux, Vim, Visual Studio, Microsoft SQL Server, Oracle, Latex, ASP.net, Team Foundation Server, RStudio, Git, Gitlab, Github

## Publications

- Eu Wern, Teh.** and Taylor, Graham W. (2020) Learning with less data via Weakly Labeled Patch Classification in Digital Pathology. In Proceedings of the International Symposium on Biomedical Imaging
- Eu Wern, Teh.** and Taylor, Graham W. (2019) Metric Learning for Patch Classification in Digital Pathology. In Proceedings of the Medical Imaging and Deep Learning
- Eu Wern, Teh.** and Taylor, Graham W. (2019) Apparent Age Estimation with Relational Networks. In Proceedings of the Computer and Robot Vision (oral presentation)
- Eu Wern, Teh.**, Zhenyu, Guo., and Yang, Wang. (2017) Object Localization in Weakly Labeled Data Using Regularized Attention Networks. In Proceedings of the IEEE Visual Communications and Image Processing (poster presentation, master thesis)
- Omit, Chanda., **Eu Wern, Teh.**, Mrigank, Rochan., Zhenyu, Guo., and Yang, Wang. (2017) Adapting Object Detectors from Images to Weakly Labeled Videos. In Proceedings of the British Machine Vision Conference (poster presentation)
- Eu Wern, Teh.**, Mrigank, Rochan., and Yang, Wang. (2016) Attention networks for weakly supervised object localization. In Proceedings of the British Machine Vision Conference (poster presentation, master thesis)
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## Papers Under Review

- Eu Wern, Teh.**, DeVries, Terrance., and Taylor, Graham W. (2020) ProxyNCA++: Revisiting and Revitalizing Proxy-Based Metric Learning
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## Honors & Awards

- Graduate Excellence Entrance Scholarship (GEES), University of Guelph, 2017.
- Graduate Enhancement of Tri-Council Stipends (GETS), University of Manitoba, 2015 - 2017.
- Conference Travel Grant, Department of Computer Science and Faculty of Science, University of Manitoba, 2016.
- International Undergraduate Student Scholarship, University of Manitoba, 2007 - 2008.
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## References

Graham Taylor (Associate Professor at University of Guelph)

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Yang Wang (Assistant Professor at University of Manitoba)

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Neil D.B. Bruce (Assistant Professor at University of Manitoba)

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