Guang-Tong Zhou

gtz@fb.com * +1 (650) 505-3982 * linkedin.com/in/gtzhou

SKILLS

Programming • **Python**, **C++**, **Matlab**, **JavaScript**

Machine Learning • Experienced with **deep learning**, **large margin methods**, **clustering**, and **anomaly detection**

Computer Vision • Experienced with **image & video understanding**, **object detection**, and **semantic segmentation**

Cloud Security • Experienced with **log analysis**, and **health monitoring**

EDUCATION

Ph.D. • **Computer Science,** Simon Fraser University, Burnaby, BC, Canada 2015

Master of Science • **Computer Science**, Shandong University, Jinan, China 2010

Bachelor of Science • **Computer Science,** Shandong University, Jinan, China 2007

TECHNICAL WORK EXPERIENCE

Research Scientist **Facebook**, Seattle, USA Jun 2018-Present

Principal Researcher **Oracle Labs**, Vancouver, Canada Dec 2015-Apr 2018

• **Deep learning for cloud security**: log analysis and health monitoring for Oracle Public Cloud (OPC)

Intern **SAP**, Vancouver, Canada Sept 2014-May 2015

• **Interactive graph visualization:** implement with JavaScript, jQuery, d3, SVG, etc.

Intern **Disney Research**, Pittsburgh, PA, USA Sept-Dec 2013

• **Scenery part discovery:** implemented MCF solver in C++ to speed up clustering by 100 times

RESEARCH EXPERIENCE

Research Assistant **Dr. Greg Mori**, **Simon Fraser University**, Burnaby, BC, Canada Jan 2011-Nov 2015

• **Structured inference neural networks:** jointly recognize image labels at multiple concept layers
• **Neural time machine:** predict when, where and what is the next activity in sport videos
• **Max-margin clustering:** extend with latent variables and hierarchical structures
• **Semantic segmentation:** leverage global object information for local pixel labelings
• **Scene understanding:** recognize scenes from a collection of objects and surfaces
• **Video event analysis:** discover events in YouTube videos; recognize falling in nursing home videos

Visiting Student **Dr. Kai Ming Ting**, **Monash University**, Churchill, Vic, Australia Aug 2009-Feb 2010

• **Mass estimation:** design and apply it for outlier detection, information retrieval and regression

Visiting Student **Dr. Zhi-Hua Zhou**, **Nanjing University**, Nanjing, Jiangsu, China Aug 2008-Jan 2009

• **Content-based image retrieval:** distance metric learning for relevance feedback

OTHER EXPERIENCE

Teaching Assistant **Simon Fraser University**, Burnaby, BC, Canada

• Taught **Machine Learning** (Fall 2011) and **Data Structures and Algorithms** (Spring 2011)

Reviewer • Conferences: **IJCAI** (2013), **NIPS** (2014,2015,2017), **CVPR** (2018)
• Journals: **TKDD** (2013), **CVIU** (2014), **TPAMI** (2014, 2016, 2017)

Web Master • **ACM SIGKDD Conference 2012** (kdd2012.sigkdd.org)

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PUBLICATIONS

[CVPR'16] • **Learning Structured Inference Neural Networks with Label Relations**.
Hexiang Hu, Guang-Tong Zhou, Zhiwei Deng, Zicheng Liao and Greg Mori.
IEEE Computer Vision and Pattern Recognition, 2016.

[THESIS'15] • **Toward Scene Recognition by Discovering Semantic Structures and Parts**.
Ph.D. Thesis, Simon Fraser University, 2015.

[ARXIV'15] • **Hierarchical Maximum-Margin Clustering**.
Guang-Tong Zhou, Sung Ju Hwang, Mark Schmidt, Leonid Sigal and Greg Mori.
arXiv:1502.01827, 2015.

[CVPRW'15] • **Discovering Human Interactions in Videos with Limited Data Labeling**.
Mehran Khodabandeh, Arash Vahdat, Guang-Tong Zhou, et al.
Workshop on Group and Crowd Behavior Analysis and Understanding (at CVPR), 2015.

[ECCVW'14] • **Learning Action Primitives for Multi-Level Video Event Understanding**.
Tian Lan, Lei Chen, Zhiwei Deng, Guang-Tong Zhou and Greg Mori.
International Workshop on Visual Surveillance and Re-Identification (at ECCV), 2014.

[ECCV'14] • **Discovering Video Clusters from Visual Features and Noisy Tags**.
Arash Vahdat, Guang-Tong Zhou and Greg Mori.
European Conference on Computer Vision, 2014.

[NIPS'13] • **Latent Maximum Margin Clustering**.
Guang-Tong Zhou, Tian Lan, Arash Vahdat and Greg Mori.
Neural Information Processing Systems, 2013.

[CVPR'13] • **Learning Class-to-Image Distance with Object Matchings**.
Guang-Tong Zhou, Tian Lan, Weilong Yang and Greg Mori.
IEEE Computer Vision and Pattern Recognition, 2013.

[MLJ'13] • **Mass Estimation**.
Kai Ming Ting, Guang-Tong Zhou, Fei Tony Liu and Swee Chuan Tan.
Machine Learning Journal, 90(1):127-160, 2013.

[PR'12] • **Relevance Feature Mapping for Content-Based Multimedia Information Retrieval**.
Guang-Tong Zhou, Kai Ming Ting, Fei Tony Liu and Yilong Yin.
Pattern Recognition, 45(4):1707-1720, 2012.

[KDDW'10] • **Relevance Feature Mapping for Content-Based Image Retrieval**.
Guang-Tong Zhou, Kai Ming Ting, Fei Tony Liu and Yilong Yin.
Workshop on Multimedia Data Mining (at KDD), 2010.

[KDD'10] • **Mass Estimation and Its Applications**.
Kai Ming Ting, Guang-Tong Zhou, Fei Tony Liu and Swee Chuan Tan.
ACM SIGKDD Conference on Knowledge Discovery and Data Mining, 2010.

[EJASP'10] • **K-means Based Fingerprint Segmentation with Sensor Interoperability**.
Gongping Yang, Guang-Tong Zhou, Yilong Yin and Xiukun Yang.
EURASIP Journal on Advances in Signal Processing, 2010(1):729378, 2010.