KeyBridge Team

Oracle Labs

Vancouver, Canada

Tel: +1 (778) 385-2663

zhouguangtong@gmail.com

cs.sfu.ca/~gza11/personal

**Guang-Tong Zhou**

linkedin.com/in/gtzhou

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| **SKILLS** | |
| **Programming** | • **Python**, **Matlab**, **C++**, **Lua**, **JavaScript** |
| **Machine Learning** | • Experienced with **large-scale systems** and **state-of-the-art algorithms** |
| **Computer Vision** | • Experienced with **scene understanding**, **semantic segmentation** and **video analysis** |
| **Data Mining** | • Experienced with **clustering**, **anomaly detection** and **graph analysis** |

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| **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 |

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| **TECHNICAL WORK EXPERIENCE** | | |
| **Senior Researcher** | **Oracle Labs**, Vancouver, Canada | Dec 2015-Present |
|  | • **Deep learning for network behavior analysis** | |
| **Intern** | **SAP**, Vancouver, Canada | Sept 2014-May 2015 |
|  | • **Interactive graph visualization:** implement with JavaScript, UI5, Neo4j, 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 | |

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| **RESEARCH EXPERIENCE** | | |
| **Research Assistant** | **Simon Fraser University**, Burnaby, BC, Canada | Jan 2011-Nov 2015 |
|  | • **Recurrent neural networks:** recognize image labels among concept layers  • **Semantic segmentation:** leverage global information for local pixel labelings  • **Max-margin clustering:** extend with latent variables and hierarchical structures  • **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  • **Anomaly detection:** contextual anomaly detection in categorical relational data  • **Content-based image retrieval:** distance learning to handle relevance feedback | |
| **Visiting Student** | **Monash University**, Churchill, Vic, Australia | Aug 2009-Feb 2010 |
|  | • **Mass estimation:** design and apply it for outlier detection, information retrieval and regression | |

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| **OTHER EXPERIENCE** | | |
| **Teaching Assistant** | **Simon Fraser University**, Burnaby, BC, Canada |  |
|  | • Taught **Machine Learning** to 20 undergrad and 50 grad students  • Taught **Data Structures and Algorithms** to 85 undergrads | Jan-Apr 2011  Sept-Dec 2011 |
| **Reviewer** | • **NIPS**: Neural Information Processing Systems  • **TPAMI**: IEEE Transactions on Pattern Analysis and Machine Intelligence  • **TKDD**: ACM Transactions on Knowledge Discovery from Data | 2014,2015,2017  2014,2016  2013 |
| **Program Committee** | • **IJCAI**: International Joint Conference on Artiﬁcial Intelligence | 2013 |
| **Web Master** | • **ACM SIGKDD Conference 2012** (kdd2012.sigkdd.org) | 2012 |

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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. |