

Dongyu Liu

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Hong Kong University of Science and Technology, Clear Water Bay, Hong Kong



Research Interests

Research Directions: big data analytics, information visualization.

Focused Research Topics: urban/e-learning data, big graph exploration, and visual comparative analysis.

Education

Hong Kong University of Science and Technology

Aug 2014 – Current

- Ph.D. in Department of Computer Science and Engineering
- Supervisor: Prof. Huamin Qu

Zhejiang University

Sep 2010 – Jun 2014

- B.Eng. in Computer Science (Chu Kochen Honors Program)
- Supervisor: Prof. Jiajun Bu and Prof. Hongxin Zhang
- Thesis: Design and Implementation of Sentiment Chatting Robot

Research / Work Experience

Microsoft Research Lab – Asia, Research Intern

Jul 2016 – Current

- Engaged in visualization on deep learning, with mentor Weiwei Cui

Tencent WeChat Fundamental Research Group, Engineer Intern

Apr 2016 – Jun 2016

- Developed a web app to analyze WeChat rumor propagation pattern

State Key Lab of CAD&CG, Zhejiang University, Research Intern

Dec 2015 – Mar 2016

- Engaged in data visualization, with supervisor Yingcai Wu

Eagle Lab, Zhejiang University, Research Intern

May 2012 – Jun 2014

- Engaged in data mining, with supervisor Jiajun Bu

State Key Lab of CAD&CG, Zhejiang University, Research Intern

Jun 2012 – Nov 2013

- Engaged in image processing, with supervisor Hongxin Zhang.

Taotaosou, Engineer Intern

Jul 2013 – Oct 2013

- Built a mobile app to explore image database with hand-draw sketches.

Selected Projects

Visual Analytics on Large-scale MOOCs Data (VisMooc)

2014 – 2016

- Built a visual analytics system based on MEAN framework to facilitate analyzing students' online learning behaviors.

Online Sentiment Chatting Robot

2013 – 2014

- Developed an online chatting robot in Weibo and WeChat Platform, used by hundreds of users.

- Led 25 persons to develop an online payment system similar to Alipay. This is a course final project (Software Engineering).

Publications

2016 SmartAdP: Visual Analytics of Large-scale Taxi Trajectories for selecting billboard locations

Dongyu Liu, Di Weng, Yuhong Li, Yingcai Wu, Jie Bao, Yu Zheng, Huamin Qu.

IEEE Transactions on Visualization & Computer Graphics (Proc. IEEE VAST). In press.

egoComp: A Node-link Based Technique for Visual Comparison of Ego-network

Dongyu Liu, Fangzhou Guo, Bowen Deng, Yingcai Wu, and Huamin Qu

Information Visualization. SAGE. In press.

A Guided Tour of Literature Review: Facilitating Academic Paper Reading with Narrative Visualization

Yun Wang, Dongyu Liu, Huamin Qu, Qiong Luo and Xiaojuan Ma

In Proc. Symposium on Visual Information Communication and Interaction. ACM. To appear.

2015 PeakVizor: Visual Analytics of Peaks in Video Clickstreams from Massive Open Online Courses

Qing Chen, Yuanzhe Chen, Dongyu Liu, Huamin Qu, Conglei Shi, Yingcai Wu

IEEE Transactions on Visualization and Computer Graphics. In press.

egoComp: A Node-link Based Technique for Visual Comparison of Ego-network

Dongyu Liu, Fangzhou Guo, Bowen Deng, Yingcai Wu, and Huamin Qu

In IEEE VIS Workshop on Exploring Graphs at Scale.

ParkVis: A Visual Analytic System for Anomaly Detection in DinoFun World

Abishek Puri, Dongyu Liu, Shaoyu Chen, Siwei Fu, Tianyu Wang, Yeuk-Yin Chan, and Huamin Qu

In Proc. Conference on Visual Analytics Science and Technology (VAST), pp. 123–124. IEEE.

2013 InSide: Interactive Sketching for Image Database Exploration

Zhang, Hongxin, Dongyu Liu, and Changhan Wang

In Proc. International Conference on Computer-Aided Design and Computer Graphics, pp. 423-424. IEEE.

Awards

Hong Kong PhD Fellowship Scheme (HKPFS, HK\$240,000 annually)	2014 - 2018
Honorable Mention Award for IEEE VAST Grand Challenge 2015	2015
Merit Award in E-Learning at The Asia Pacific ICT Alliance 2015 with VisMOOC team	2015
Best Innovation Silver Award at The Hong Kong ICT AWARDS 2015 with VisMOOC team	2015
Excellent Student Award, Chu Kochen Honors College, Zhejiang University	2014
Honorable Mention Award for COMAP's International Mathematical Contest in Modeling	2013
Honorable Mention Award for CSIAM's China Undergraduate Mathematical Contest in Modeling	2012
Rank No.1 in National Olympiad in Informatics in Provinces	2009

Research Talks

Finding Optimal Billboard Locations from Large-Scale Taxi Trajectories

Apr 2016

Workshop on Visual Analytics of Urban Data, Zhejiang University

How to Develop a Web Application	Jan 2016
Microsoft Research Asia Symposium on Collaborative Research	
Visual Analytics of Massive Open Online Courses	Nov 2015
Microsoft Research Asia Symposium on Collaborative Research	
egoComp: A Node-link Based Technique for Visual Comparison of Ego-network	Oct 2015
Workshop on Exploring Graphs At Scale, IEEE VIS 2015, Chicago, USA	
ParkVis: A Visual Analytic System for Anomaly Detection in DinoFun World	Oct 2015
VAST Challenge, IEEE VIS 2015, Chicago, USA	

Academic Services

Journal Reviewer	IEEE Transactions on Visualization and Computer Graphics	2016
	Journal of Software, China	2015
Conference Reviewer	IEEE Information Visualization Conference (InfoVis)	2015 - 2016
	IEEE Conference on Visual Analytics Science and Technology (VAST)	2015 - 2016
	Eurographics/IEEE Conference on Visualization	2015 - 2016
	IEEE Pacific Visualization Symposium (PacificVis)	2015 - 2016
	International Symposium on Graph Drawing and Network Visualization	2016

Skills

Programming	Proficient in HTML5 + CSS3 + Javascript, Python, C++ Familiar with Java, C#, Matlab
Web Development	MEAN framework, Typescript, React, D3.js
Tools	MongoDB, MYSQL, Redis, OpenGL, OpenCV, Lucene
Prototyping	Adobe Illustrator, Adobe Photoshop