Mingwei Li

Vanderbilt University
Department of Computer Science

mingwei.li at vanderbilt.edu
https://tiga1231.github.io/

Experience

Vanderbilt University
Postdoctoral Scholar, Research, 2021 - Present.

Education

University of Arizona
Doctor of Philosophy in Computer Science, 2016 - Aug 21, 2021.
Field: Data Visualization, Machine Learning
Minor: Mathematics
Thesis: Algebraic Visual Design for Deep Learning
Advisor: Prof. Carlos Scheidegger

Hong Kong University of Science and Technology
Bachelor in Electronic Engineering, Honor Research Program, 2015
Minor: Mathematics
Thesis: Wi-Fi based Indoor Localization
Advisor: Prof. Shenghui Song

Teaching

Department of Computer Science, University of Arizona
Teaching Assistant, CSC 245, Introduction to Discrete Structures, Summer 2018
Teaching Assistant, CSC 337, Web Programming, Fall 2016

Department of Electronic and Computer Engineering, HKUST
Student Helper, ELEC 1100, Introduction of Robotics, Fall 2012

Awards and Fellowships

GPSC Travel Grant
University of Arizona, Oct 2018

Graduate Assistantship, Department of Computer Science
University of Arizona, 2016-2021

Dean's List, School of Engineering
Hong Kong University of Science and Technology, 2011-2014

Scholarship for Continuing Undergraduate Students
Hong Kong University of Science and Technology, 2011-2014

Papers

Graph Drawing, 2020-Current

K Gray, M Li, R Ahmed, S Kobourov. Visualizing Evolving Trees. arXiv preprint arXiv:2106.08843, 2022

R Ahmed, F De Luca, S Devkota, S Kobourov, M Li. Multicriteria Scalable Graph Drawing via Stochastic Gradient Descent, $(SGD)^2$. IEEE Transactions on Visualization and Computer Graphics 28 (6), 2388-2399, 2021

[Best Paper Award] Ahmed R, De Luca F, Devkota S, Kobourov S, Li M. Graph Drawing via Gradient Descent, $(GD)^2$. arXiv preprint arXiv:2008.05584. 2020 Aug 12. Demo available `http://hdc.cs.arizona.edu/~mwli/graph-drawing/`

Deep Learning Visualization, Multi-dimensional Data Visualization 2017-Current

Zhe Wang, Dylan Cashman, Mingwei Li, Jixian Li, Matthew Berger, Joshua A Levine, Remco Chang, Carlos Scheidegger. Neuralcubes: Deep representations for visual data exploration. 2021 IEEE International Conference on Big Data (Big Data), 550-561

Mateus Espadoto, Gabriel Appleby, Ashley Suh, Dylan Cashman, Mingwei Li, Carlos E Scheidegger, Erik Wesley Anderson, Remco Chang, Alexandru Cristian Telea. UnProjection: Leveraging Inverse-Projections for Visual Analytics of High-Dimensional Data. IEEE Transactions on Visualization and Computer Graphics, 2021

[Best Submission Award] M. Li, and C. Scheidegger. Toward Comparing DNNs with UMAP Tour. VISxAI workshop, IEEE VIS 2020. Available at `https://tiga1231.github.io/umap-tour/`

M. Li, Z. Zhao, and C. Scheidegger. Visualizing Neural Networks with the Grand Tour. Distill.pub, 2020. Available at `https://distill.pub/2020/grand-tour/`

M. Li, Z. Zhao, C. Scheidegger. Visualizing Neuron Activations with the Grand Tour. Proceedings of the Workshop on Visualization for AI (VISxAI), 2018.

Perception in Visualization, Algebraic Visualization, 2018-2019

M. Correll, M. Li, G. Kindlmann, and C. Scheidegger. Looks Good to Me: Visualizations as Sanity Checks. IEEE Transactions in Visualization and Computer Graphics (Proceedings of InfoVis), 2018.