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Javid Chien-Hsin Hsueh

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Javid is a senior data visualization engineer at Uber. At Uber, he builds self-service data tools to consolidate information, create exploratory data visualizations to get actionable insights and contribute efforts to open-source projects to give back to the community. He's been working in several business domains, including business intelligence, risk & safety, A/B testing, and machine learning. Expert in data visualization and UI/UX design.

EMPLOYMENT

Senior Software Engineer - Visualization **Uber** San Francisco, CA Feb 2016 - Present

- Leading efforts to build machine learning visualization and the machine learning platform UI "Michelangelo" .
- Lecturer for data visualization in Graduate school of management, UC Davis.
- Uber knowledge graph visualization tool which helps Risk & Safety team to investigate frauds.
- Published open source graph rendering library graph.gl (https://graph.gl), and contribute to several open-source frameworks in react-vis, deck.gl, kepler.gl
- Built a set of self-service dashboarding tools and business insight visual analytic tools.

Resident Scientist **Exploratorium** San Francisco, CA July. 2014 – Sept. 2014

- Designed and implemented interactive visualizations of marine animal movement data sets.
- Developed an exhibit showing the migration of marine animals with tangible user interface.

Graduate Researcher **UC Davis** Davis, CA Sept. 2012 – 2016

- Worked with Prof. Kwan-Liu Ma in Visualization & Interface Design Innovation Research Group.
- Designed and implemented several interactive visualization research projects. Major topics include time series storyline, movement data analysis, dedupe problem, and user behavior analysis.

EDUCATION

University of California, Davis, Master of Computer Science Sept. 2012 – Feb 2016**,** Davis, CA

- Working with Prof. Kwan-Liu Ma in Visualization & Interface Design Innovation Research Group.

National Taiwan Normal University, Bachelor/Master of Computer Science Sept. 2005 - Jun. 2011, Taipei

- Worked with Prof. Yung-Pin Cheng in Software Engineering Lab.
- Intrusive test automation with failed test case clustering. Outstanding research award APSEC 2011.

RESEARCH PROJECTS

- **Marine animal migration visualization**(2015). Developed interactive data visualizations of ocean animal datasets, enabled visitors to discover patterns and engage in meaningful self-directed explorations.
- **A Visual Approach for Name Disambiguation in Coauthorship Networks** (2015). Developed an interactive visual tool for large coauthorship networks, to identify cases of homonymy and/or synonymy, and solve the name ambiguity problem.
- **Comparative Driving Behavior Visualization** (2014). Developed a web-based interactive system to explore and compare the driving behavior from probe data. A new visual metaphor is designed for representing driving behavior of history trips.
- **Incremental Storyline Layout Algorithms for Streaming Data** (2013). A set of greedy-based layout algorithm is proposed to deal with streaming data and improve the layout periodically by an extreme optimization strategy.
- **Intrusive Test Automation with Failed Test Case Clustering**(2011). By analyzing the execution traces of failed test cases in a daily build, the representative failed test cases are selected by proposed clustering techniques.

PUBLICATIONS

- **Chien-Hsin Hsueh**, Jia-Kai Chou, Kwan-Liu Ma. A Study of using Motion for Comparative Visualization. In IEEE Pacific Visualization Symposium, 2015.
- **Chien-Hsin Hsueh**, Jacqueline Chu, Kwan-Liu Ma, Joyce Ma, Jennifer Frazier. Fostering Comparisons: Designing an Interactive Exhibit that Visualizes Marine Animal Behaviors. In IEEE Pacific Visualization Symposium, 2015.
- Christopher Muelder, **Chien-Hsin Hsueh**, Kwan-Liu Ma, A Visual Approach for Name Disambiguation in Coauthorship Networks. Submitted to IEEE Visual Analytics Science and Technology 2015, under review.
- Yuzuru Tanahashi, **Chien-Hsin Hsueh**, Kwan-Liu ma. An Efficient Framework for Generating Storyline Visualizations from Streaming Data. In IEEE Transaction on Visualization and Computer Graphics, 2015.
- **Chien-Hsin Hsueh**, Yung-Pin Cheng, Wei-Cheng Pan. Intrusive test automation with failed test case clustering. Outstanding research award, In ACM Proceedings of APSEC'2011, Ho Chi Minh, Vietnam.
- Yung-Pin Cheng, Han-Yi Tsai, Chih-Shun Wang, **Chien-Hsin Hsueh**. xDIVA: automatic animation between debugging break points. In ACM Proceedings of SOFTVIS'2010. pp. 221~222, Utah, USA.