KRIST **WONGSUPHASAWAT**

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OBJECTIVE

Apply *data visualization* to visually explore data, find insights and communicate findings to support decision-making.

EDUCATION

University of Maryland, College Park, MD, USA

2012 – Ph.D. in Computer Science / Dissertation Title "Interactive Exploration of Temporal Event Sequences"

2009 – M.S. in Computer Science / Concentration in Human-Computer Interaction

Chulalongkorn University, Bangkok, THAILAND

2007 – B.Eng. in Computer Engineering with first-class honor, GPA: 3.96

EXPERIENCE

Staff Data Visualization Scientist at **Twitter, Inc.**, San Francisco, CA, USA 2015-Present

Senior Data Visualization Scientist at **Twitter, Inc.**, San Francisco, CA, USA 2013-2015

Data Visualization Scientist at **Twitter, Inc.**, San Francisco, CA, USA 2012-2013

Develop and maintain company-wide internal dashboard system. Develop custom data visualization tools for data analysis in various domains: log monitoring, experimentation, funnel analysis and abuse. Led the design and front-end development of dashboard for viewing A/B test results. Build self-serve tools for communications team to tell story from Twitter data. Create custom visualizations to tell story about what happened on Twitter. Teach D3.js and data visualization classes. Mentor summer interns. Open-source Javascript libraries: Labella.js and d3Kit.

Co-founder of **Printnista Co., Ltd.,** Bangkok, Thailand 2013-2016

Develop an online printing service for Bangkok metropolitan area with web-based graphic editor.

Research Assistant at **Human-Computer Interaction Laboratory (HCIL)**, UMD 2009-2012

Develop LifeFlow, a visualization technique that helps users understand millions of event sequences in a million pixels. Develop Similan, a tool for querying event sequences by similarity. Run case studies and user studies to evaluate visualization tools.

Research Intern at **IBM T.J. Watson Research Center**, Hawthorne, NY, USA 2011

Develop Outflow, a visualization technique for understanding patient flow by symptoms and outcome.

Research Intern at **Microsoft Research**, Redmond, WA, USA 2010

Develop ActiveText, a framework for knowledge extraction, organization and discovery, which combines natural language processing, user interface design and information visualization techniques.

Research Assistant at **Center for Advanced Transportation Technology (CATT) Lab**, UMD 2008

Develop Incidents Clustering Explorer (ICE), a visualization tool for supporting traffic engineers in analyzing traffic incident data.

Teaching Assistant at **Department of Computer Science**, UMD 2007-2008

CMSC131 Object-Oriented Programming (Java)

System Analyst at **ITOne Co., Ltd.**, Thailand 2007

Deploy SAP WM (Warehouse Management) at HomePro Distribution Center, Wang Noi, Ayuddhaya, Thailand.
Develop a chart generator program for CRM Application Management Team.

Software Developer Intern at **The Stock Exchange of Thailand (SET)** 2006

Develop a caching system for settrade.com, a stock trading website.
Develop a simulator for calculating derivatives margin according to the Thailand Future Exchange (TFEX) policy.

TECHNICAL SKILLS

Languages: *Advance:* Javascript, HTML, CSS *Intermediate:* Java, C#, node.js *Basic:* Scala, Ruby, Python, R, PHP
Framework: D3, React, Angular **Data:** MySQL, Vertica, Hadoop (Scalding, Pig) **Design:** Adobe Photoshop, Sketch

SELECTED PROJECTS

Dashboards, Visual Analytics Tools and Techniques

DDG [Javascript, Ruby on Rails, Scala, SQL] (Twitter) 2014-2015

DDG is Twitter's A/B testing platform. I led two major redesigns and front-end development of the dashboard for viewing experiment results. Responsibilities: customer interviews, design, front-end implementation and a few endpoints on the backend.

Scribe Radar [Javascript, Ruby on Rails, SQL] (Twitter) 2013-2015

Twitter has a centralized logging infrastructure with over 10,000 types of events. This visual analytics tool was developed to help employees navigate the collection of events, find events of interest and also monitor changes. Responsibilities: research and develop how to visualize the collection, build APIs to query data from database.

Flying Sessions [Javascript, Ruby, Java, Pig, Scalding] (Twitter) 2012-2016

This funnel analysis tool was built on top of the logging infrastructure above to help data scientists learn more about user behaviors. Responsibilities: research and develop how to adapt and scale known visualization techniques, implement data pipeline.

Outflow [Javascript] (IBM) 2012

A new technique was developed to visualize medical histories and associated outcomes. Physicians then can use past patient histories to guide current patient's treatment. This project was patented and integrated into the product IBM CareFlow.

LifeFlow [Java] (HCIL, Univ. of Maryland) 2009-2012

My PhD dissertation is a technique to summarize large number of event sequences to reveal the common sequence and highlight the gaps between the events within sequences. I conducted several case studies to show its applications in many domains.

Interactive visualizations for general audience

Responsibilities: Gather data from Hadoop, process and analyze data to find patterns, design and implement the visualization.

Game of Thrones [Javascript, Scalding] 2016

Construct network of relationships between characters from Tweets about Game of Thrones. The output reveals the major talking points of every episode and was featured by many publishers.

NFL, NBA and Premier League Fan Maps [Javascript, Pig] 2014-2015

Visualization of sports fans' locations and show where the supporters of each team are.

Open-source

Labella.js [Javascript] (Twitter) 2015

A library for placing labels on timeline without overlap. This project has over 3,000 stars on github.

d3Kit [Javascript] (Twitter) 2015

A set of base classes and utilities for creating reusable charts with D3

SELECTED PUBLICATIONS

[1] Krist Wongsuphasawat and Jimmy Lin. **Using Visualizations to Monitor Changes and Harvest Insights from a Global-Scale Logging Infrastructure at Twitter.** IEEE Conf. Visual Analytics Science and Technology (VAST), 2014.

[2] Krist Wongsuphasawat and David Gotz. **Exploring Flow, Factors, and Outcomes of Temporal Event Sequences with the Outflow Visualization.** In IEEE Transactions on Visualization and Computer Graphics, 2012.

[3] Krist Wongsuphasawat et al. **LifeFlow: Visualizing an Overview of Event Sequences**. ACM SIGCHI Conference on Human Factors in Computing (CHI), 2011.

[4] Krist Wongsuphasawat and Ben Shneiderman. **Finding Comparable Temporal Categorical Records: A Similarity Measure with an Interactive Visualization.** IEEE Symp. Visual Analytics Science and Technology (VAST), 2009.

[5] Krist Wongsuphasawat et al. **Visual Analytics for Transportation Incident Datasets.** in Transportation Research Record: Journal of the Transportation Research Board. Vol. 2138, pp. 135-145, 2009.

PUBLIC SERVICES

I have given guest lectures at various universities: UC Berkeley, Univ. of North Carolina, GATech, Univ. of San Francisco and Chulalongkorn Univ. In addition, I serve as a reviewer for many academic publications, such as CHI, InfoVis, VAST, TVCG, AVI and IV.

SELECTED ACHIEVEMENTS

+ Winner of Interactive Category in Data Visualization Challenge held by informationisbeautifulawards.com
+ Award for Excellence in Visualization Research from National Academy of Sciences Transportation Research Board
+ University of Maryland Graduate Fellowship for outstanding academic record
+ Winner of RoboCup Thailand Championship 2006
+ 2nd Runner-Up in World RoboCup 2006, Bremen, Germany
+ Winner of "Information" Category in DTAC & Nokia iAwards 2004 –National Mobile Applications Contest
+ Winner of "Webroon.com" National Student Alumni Website Contest 2001 –National Website Contest
+ Hold 5 US Patents

Please visit my homepage http://kristw.yellowpigz.com for links to projects and more information. Last updated: Jan 20, 2017