

Wenyuan Wang

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AREAS OF INTEREST

Human Information Interaction, Machine Learning, Data Mining, Visual Analytics, User Study, UI/UX, Health Science

EDUCATION

UNC Chapel Hill, Ph.D. in Information and Library Science

August 2017 - Present

University of Pittsburgh, M.S. in Information Science [GPA: 3.964]

August 2013 - April 2015

SKILL SET

Python Java JavaScript SQL R Network User Study User Interface

RESEARCH EXPERIENCE

Visual Analytics and Communication Lab, UNC - RAship with Professor David Gotz Fall 2017 - Fall 2019

- Contribute implementing **Cadence**, a visual analytics platform for high dimensional health data that is currently under development with NSF grant support, using Java and JavaScript
- Data retrieval and analysis, including bridging data from different platform and mapping data with different code system (ICD9, ICD10 and SNOMED) using PostgreSQL Database and Python
- Contribute in data generation and analysis to support *Visual Model Validation via Inline Replication*, a partition-aggregation strategy for better validation achievement in visual analytics progress, using Python and R
- Parse and clean a soccer dataset for Cadence to visualize 900 soccer game and related events (1.8M data points)

Regulatory Document Analysis -- Credit Suisse Field experience sponsored by SILS, UNC

Spring 2019

- The goal is to find relevant statistical figures from a collection of regulatory documents
- Implement basic framework for document processing using Python
- Implement a basic rule-based process to parse documents and visualize the trend from different documents in time order

Hearthstone (CCG game) data analysis, UNC - Personal Interest

Fall 2018

- Data mining for different datasets under current circumstance of missing and messy data
- Modeling on game status representation, study on related game simulators
- Inspired by AAAI'17 data challenge paper, *Teaching AI to play hearthstone*, study on CNN and MonteCarlo tree search

Quora Question Pair - Kaggle challenge, UNC - Group Project

Spring 2018

- Replicate the method proposed by Homma et al, utilizing LSTM and google-300-word2vec to train the dataset using Python

Obama Care Visualization, UNC - Group Project

Fall 2017

- Interactive data visualization on Obama Health Care trend during past 5 years, including coverage and cost
- Utilize D3 library of JavaScript for visual interaction, and geo data for map generation

UI/UX related studies, UNC

Fall 2018 - Fall 2019

- Design information interaction studies in AR/VR environment, implementing user studies, interface design and usability testing life-cycles
- User study designs in both qualitative and quantitative approaches.

PUBLICATIONS

- David Gotz, Jonathan Zhang, **Wenyuan Wang**, Joshua Shrestha, David Borland (2020). Visual Analysis of High-Dimensional Event Sequence Data via Dynamic Hierarchical Aggregation. IEEE TVCG (Volume 26, Issue 1).

- David Borland, **Wenyuan Wang**, Jonathan Zhang, Joshua Shrestha, David Gotz (2020). Selection Bias Tracking and Detailed Subset Comparison for High-Dimensional Data. IEEE TVCG (Volume 26, Issue 1).
- Jonathan Zhang, David Borland, **Wenyuan Wang**, Joshua Shrestha, David Gotz (2019). Dynamic Hierarchical Aggregation, Selection Bias Tracking, and Detailed Subset Comparison for High-Dimensional Event Sequence Data. Visual Analytics in Healthcare (VAHC) Workshop Posters.
- David Gotz, **Wenyuan Wang**, Annie T Chen, David Borland (2019). Visualization Model Validation via Inline Replication. Information Visualization (Volume 18, Issue 4).
- David Borland, **Wenyuan Wang**, David Gotz (2018). Contextual Visualization: Making the Unseen Visible to Combat Bias During Visual Analysis. IEEE CG&A (Volume 38, Issue 6).

WORKING EXPERIENCE

NetApp, Inc., Raleigh, NC - Quality Assurance Engineer

June 2015 – May 2016

- Test product based on virtual volume concept to enhance usage of NetApp Storage System in VMware environment, mapping networks of varied appliances with Linux kernel to assemble testing environment configurations, with light PowerShell scripts usage in later phase

TMG Health, Wexford, PA - Product Development Intern

February 2015 – April 2015

- Debug and improve the Broker Portal System (core agent management system) using Liferay Developer Studio
- Develop and execute test suite for product QA using Selenium