Robert Gove

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Skills

Software: Git, Rollup, Docker, Elasticsearch, MongoDB, Sketch, Chrome Developer Tools
Languages: HTML, CSS, JavaScript, Sass, Python, SQL
Frameworks: D3, Svelte, Flask, Sklearn, React, AngularJS, NodeJS, Express

Experience

Distinguished Data Visualization Scientist - Two Six Technologies: Dec 2013 - Present

- Performed as PI, tech lead, and front end engineer on several R&D programs. Set direction for technical efforts, managed project schedule, performed customer briefings, and created progress reports.
- Designed a cyber security incident report timeline visualization tool, gathered user feedback, and developed a summarization algorithm that reduces data size 79% and increases precision 41% (JS/HTML/CSS, D3, Flask, Python). VizSec Best Paper Award; TVCG and PacificVis papers.
- Led a team of four data scientists to develop a system that increases t-SNE embedding accuracy 8% by predicting optimal t-SNE hyperparameters for a given data set (Python, sklearn, Pandas, Jupyter).
- Performed requirements gathering, created mockups, conducted user feedback sessions, and managed a front end engineer to develop a Chrome plugin and GitHub dashboard for analyzing code repository risks. VDA Best Paper Award.
- Designed and evaluated novel graph layout algorithms that reduced runtime 18% - 76% using dynamic approximation updates and random sampling (JS, D3). FMT Best Paper Award; EuroVis paper.
- Developed a graph exploration tool using a rank-by-feature framework, reduced graph featurization time to O(n), and sped up rendering by using tile pyramids (JS/HTML/CSS/SASS, D3, Leaflet, AngularJS, Python, NetworkX, MongoDB, Docker). IV Best Paper Award.

Analytic Tool Developer - Booz Allen Hamilton: June 2011 - Dec 2013

- Designed and implemented novel data visualizations of uncertain project schedules using Flex. Wrote research report and presented results at IEEE VIS.
- Led teams of developers to design, prototype, implement, test, and deploy tools to government clients to analyze communication networks, aircrew readiness, and emergency planning.
- Performed requirements gathering with internal and external clients. Worked with clients to iteratively design user interfaces and visualizations to meet client data analysis needs. Implemented solutions using D3, jQuery, JavaScript, and Flex.
- Received five awards for producing exceptional project deliverables and presentations.

Education

University of Maryland, College Park: May 2011
M.S. in Computer Science, Information Visualization concentration
Thesis: Usability evaluation of Action Science Explorer. Advisor: Dr. Ben Shneiderman.

University of North Carolina at Greensboro: May 2009
B.S. in Computer Science and Applied Math (dual degree); Spanish Minor
Disciplinary honors thesis: "Evolutionary Computation: Optimizing Resource Allocation in A. lyrata"

Honors and Awards

Best Paper Awards (VizSec 2021, VDA 2020, IV 2019, FMT 2018)
Best Poster Award (VizSec 2020)

Patents

- Dynamic updates to force-approximation models—USPTO #11087048
- Fast, human interpretable graph comparison features—USPTO #US10657686
- Linear-time graph embedding algorithm—USPTO #US10565749

Service

- VizSec: Steering Committee 2019 - present, General Chair 2019, Sponsorship Chair 2017-2018, Program Committee 2015 - present
- Conference reviewer: InfoVis (2016, 2019-2020), VAST (2016-2017, 2019-2020), EuroVis (2016, 2018-2019)