Robert Gove

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Skills

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

Experience

Senior Data Visualization Engineer - CrowdStrike June 2022 - Present
- Engineered scalable UI solutions to analyze data sets with millions of events.
- Designed internal and external customer-facing UIs in collaboration with cyber security analysts.

Distinguished Data Visualization Engineer - Two Six Technologies: Dec 2013 - May 2022
- Performed as PI, tech lead, and front end engineer on numerous projects. Set direction for technical efforts, managed project schedule, performed customer briefings, and mentored junior staff.
- Designed and engineered an incident report visualization tool, and developed a summarization algorithm that reduces data size 79% and increases precision 41% (JS/HTML/CSS, D3, Flask, Python).
- Led a machine learning team to develop a system that increases t-SNE embedding accuracy 8% by predicting optimal t-SNE hyperparameters (Python, sklearn, Pandas, Jupyter).
- Performed requirements gathering, created mockups, conducted user feedback sessions, and managed a front end engineer to develop a GitHub dashboard for analyzing code repository risks.
- Designed and evaluated novel graph layout algorithms that reduced runtime 18% - 76% using dynamic approximation updates and random sampling (JS, D3).
- 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).

Analytic Tool Developer - Booz Allen Hamilton: June 2011 - Dec 2013
- Designed and implemented novel schedule visualizations.
- Led teams of developers to design, prototype, implement, test, and deploy tools to government clients to analyze communication networks, aircrew readiness, and emergency planning.
- Consulted with internal and external clients to gather requirements and iteratively design user interfaces.
- 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 - 2023, General Chair 2019, Sponsorship Chair 2017-2018, Program Committee 2015 - 2023
- Conference reviewer: InfoVis (2016, 2019-2020), VAST (2016-2017, 2019-2020), EuroVis (2016, 2018-2019)