

Andrew Collier

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portfolio acollier.com

Experience **Founder** / Traffic Hackers

2013 – Present / Boston, MA

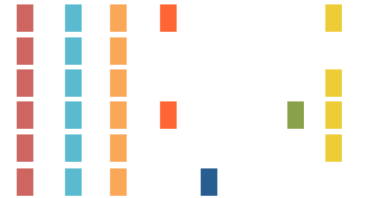
Managed performance and efficiency of a real-time highway traffic prediction model
Designed and implemented intuitive visualizations of traffic predictions using D3
Utilized Amazon Web Services to provide a scalable delivery platform for traffic predictions



Senior Software Engineer / Gerson Lehrman Group

2012 – Present / Austin, TX / Boston, MA / Hong Kong SAR, China

Employed Angular to develop and maintain customer management web applications
Created and maintained Polymer elements for use across multiple web applications
Designed a highly performant Chrome extension providing context-based browser alerts
Developed a low latency company resource autocomplete backed by an in-memory trie
Utilized D3 to create a geospatial overview of company growth opportunities
Implemented a recursive JavaScript injection mechanism for legacy web applications



Environmental Consultant / Trinity Consultants

2008 – 2015 / Columbus, OH / Boston, MA

Developed mobile inspection checklist applications for industrial clients
Created web and desktop applications to determine client compliance with EPA permits
Built a web-based greenhouse gas emissions database for transportation sources
Processed and queried heterogeneous multi-gigabyte datasets
Designed tools to transform regulatory text into machine-readable XML



Research Software Developer / The University of California, San Diego

Summer 2006 / La Jolla, CA

Processed, translated, and visualized earthquake test data using Maya and shell scripts
Researcher at the San Diego Supercomputer Center (SDSC)



Engineering Intern / Ruggles and Bohm, P.A.

Summers, 2003 – 2005 / Wichita, KS

Used AutoCAD and GIS tools to design roadway layouts
Produced a project management database with invoice tracking
Recorded and modernized company website while reducing download size



Education **M.S. Civil Engineering** / The University of Illinois at Urbana-Champaign

2006 – 2008 / Champaign, IL

Created a real-time environmental dashboard with map visualizations
Developed a generalized database visualization and exploration tool
Researcher at the National Center for Supercomputing Applications (NCSA)



B.S. Civil Engineering, Cum Laude / The University of Notre Dame

2002 – 2006 / Notre Dame, IN

Modeled massive cryosphere rupture events at Athabasca Valles, Mars
Coded an automated structural analysis system for hospital construction

Skills

Web Applications

Node D3 Polymer Angular Mustache Sass Express Browserify OpenGL

Data Management

Microsoft SQL MySQL PostgreSQL PostGIS MongoDB

Engineering Design

Transportation Planning Roadway Design AutoCAD ArcGIS