K E V I N   B R O C K W A Y

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FRONT-END ENGINEER | USER EXPERIENCE | HTML/JAVASCRIPT/CSS

Senior front-end software engineer with experience creating high quality web-based user interfaces. Experience spans the creation of complex, unique, and innovative software for a wide range of projects, from exhibits in museums to a control panel for lighting/HVAC on a private yacht, most recently as the Primary UI Developer for the Allen Coral Atlas at **Vulcan Inc**. Proven ability to create excellent user experiences and develop code that is both elegant and scalable. Advanced knowledge of software engineering best practices and standards. Enjoys being involved in the full development lifecycle of simple web tools and complex applications.

TECHNICAL SKILLS

Languages: HTML, CSS/LESS, Typescript/JavaScript, SQL
Tools: NPM, Yarn
Software: GIT, Visual Studio Code
Web Frameworks, etc: Angular (CLI), React, jQuery, MapBox

PROFESSIONAL EXPERIENCE

2001 – 2019: Vulcan Inc   Seattle, WA
SENIOR SOFTWARE ENGINEER, ALLEN CORAL ATLAS   2019
- Developed several new React components, including the new registration/sign-in forms which users will use to create an account, then save AOI in a private, sharable list (a key product requirement).
- Improved the Atlas' drawing tools using the MapBox API, including cursors, tooltips and other visual cues, which enabled easier AOI creation, the main product feature.
- Designed and developed a search tool using MapBox, React, Redux, and Yarn. Design integrated with existing tools, was aesthetically pleasing, and met functionality requirements.

SENIOR SOFTWARE ENGINEER, MEDIA SYSTEMS UI   2007 – 2019
- Front-end developer for many internal projects including librarian tools, media ops support tools, conference room controls, and Seahawks Stadium Suite controls.
- Created and developed proprietary tools, including CERT, IPML, and others.
- Created the front-end webpage for custom monitoring software for a high-end video card and an Angular project that was served from the app, enabling browser to be used to display active status and other data about each port on the card, and watch the actual video for each channel with an embedded HTML5 Video player.

SOFTWARE ENGINEER   2001 - 2007
- Named as a patent holder (US2010115334A1) for involvement in CERT project. The software coordinated multiple computers so that mail, browsers and other apps could be synced. Created the first version in Visual Basic, and the result was interesting and useful enough that the company created a new team to develop it further.
- Invited to develop web UIs to run two exhibits for the opening of the Science Fiction Museum using Flash/ActionScript to display and control all assets:
  1. Space Dock used a dual-plane monitor that allowed a single web page to show the left side of the page as the front (touch enabled) of the plane and the right side displayed the back of the plane. Created an interactive web page that allowed users to explore several spaceships from famous sci-fi movies as 3D models or watch movies about the ships.

2. Amazing Places was a glass globe that projected from inside to produce a spherical movie and make the globe appear to be one of several planets in sci-fi movies or books. The UI allowed users to select the planet and change the appearance of the globe.

- Created a web page with an embedded VNCX control and a Classic ASP backend to coordinate the system and a proprietary TCP object to control the encoder for Vulcan's IP Media Library (IPML). App allowed users to watch anything in the collection from anywhere, select the encoding quality, and control the experience from a laptop while allowing IT to control access in real time.
- Developed and maintained the web UI for a complex, private media delivery system for one of the largest media collections in the world. The system allowed multiple media items (tv, video, and audio) to play simultaneously and pause and reconstruct the same experience as the user moved to a car or another location.
- Created the SpaceShipOne Viewer, a web page that allowed Paul Allen to watch the X-Prize test flight from his laptop. UI was a simple but elegant page with 2 embedded WMP video players playing 2 live streams from the ship (wing cam and pilot dashboard). End product was so effective that I was invited to contribute an item to be flown on the first official X-Prize flight. App was used by all employees to watch both X-Prize flights.
- Used C# to create an executable for use on a touch panel that controlled the HVAC/lighting system on Paul Allen's private yacht. Simulated back end behavior to develop the UI while yacht was being built in Germany and then traveled to Germany to supervise the installation.
- Loaned to the Allen Institute for Brain Science to work on the first version of the Allen Brain Atlas. Built requested design with Flash (ActionScript) for the image viewers as a single page with multiple resizable viewers. Innovated project with an idea for a more useful, single image viewer. Customer liked the updated design so much they featured it as the main way to explore the images.

WEB DEVELOPER (AS INDEPENDENT CONTRACTOR)   2001

- Designed and developed the Lab Request System for Vulcan. Website included an interactive map of the lab, automated confirmation/reminder emails, daily reports, and analysis tools.
- Developed applications using SQL database, Classic ASP middle tier, and HTML/CSS/JavaScript front-end.
- Delivery package included User Manual, Owner's Manual, and installation CDs. The software ran continuously for more than a decade and was a valuable tool for the team that ran the lab.

1999 – 2001: Humongous Entertainment   Bothell, WA
E-COMMERCE WEB DEVELOPER

- Front-end web developer for the Humongous e-commerce site and several internal tools (server/network monitors, reporting tools).

EDUCATION

Bachelor of Science, The University of Connecticut—Storrs, CT

PATENT & PUBLICATION

CERT Initial developer and Inventor for patent US20100115334A1, An application-level-runtime-state save-and-restore utility.

Published author in *Nature* from the initial Allen Brain Atlas.
Genome-wide atlas of gene expression in the adult mouse brain