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## EMPLOYMENT

<b>Software Engineer</b>	<b>Trader Interactive</b>	<b>2020-Present</b>
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Lead engineer of frontend development initiatives across TI's numerous industry-leading vehicle classifieds websites.

- Project lead for rebuild of 11 vehicle classified websites in a legacy monorepo into a brand new Vue.js stack, resulting in 15 point increases to Core Web Vitals and profound reduction of technical debt.
- Reduced JS size by 40% across 11 websites upon being elected to performance taskforce, auditing large codebases for bottlenecks and evangelizing performance practices across the engineering department.
- Partnered with design department to introduce TIDE, the organization's inaugural Design System, standardizing Vue/Figma component libraries and custom CSS framework, significantly boosting design and UI team collaboration.
- Performed large UI overhaul of RVInsider and CycleInsider, resulting in a significant increase in user engagement.
- Implemented visual redesign of RVT.com with great accuracy, bringing delightful user experience to a dated site.
- Primary UI engineer working for over 2 years on Boatline.com, a new marine vehicles marketplace built with Next.js.
- Won company-wide hackathon, beating 39 teams to claim 25k cash prize by integrating AI to expedite ad placement.

<b>Web Designer</b>	<b>Dittos</b>	<b>2019-2020</b>
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Kickstarted marketing agency's web services department.

- Consulted with prospective clients to establish project requirements.
- Wireframed websites in Figma, collaborating with clients to meet business and marketing goals.
- Developed deployed WordPress websites for numerous local businesses.
- Performed upgrades and enhancements to existing small business websites.

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## PROJECTS

**Personal Website:** [www.joshhowson.com](http://www.joshhowson.com) (for additional information & projects)

**Snapshop - AI Visual Search** ([ti-snapshop.vercel.app](https://ti-snapshop.vercel.app))

- Developed AI-driven tool which allows users to snap a photo of any vehicle, and immediately be served matching results across many vehicle marketplaces, built during a 3-day hackathon with a designer and product manager.
- Integrated OpenAI's Vision API for image analysis.
- Prompt engineered for consistent and useful AI-generated JSON responses, and maximally confident matches.
- Created a beautiful custom card shuffle animation to delight the user while they wait for results.
- Used Canvas API to resize images on the client side to minimize OpenAI image processing fees.
- Utilized: Gen AI, OpenAI Vision API, Vue.js, Nuxt.js, CSS animation, Canvas API.

**Fantano Sevens - Music Discovery App** ([www.fantanosevens.com](http://www.fantanosevens.com))

- Realized my ideal web app which randomly selects a highly rated album from popular critic Anthony Fantano.
- Designed and prototyped the app in Figma, leveraging its component and design system features.
- Spun up RESTful API endpoints to fetch albums and provide a richer experience via metadata from Spotify's Web API.
- Invented cool new CSS-driven form control paradigm to detect when an element has flipped in 3D.
- Utilized: Vue.js, Nuxt.js, TypeScript, RESTful APIs, Vercel, Local storage, SCSS, Spotify API.

**YT Thumbnail Previewer** ([yt-thumbnail-preview.joshhowson.com](https://yt-thumbnail-preview.joshhowson.com))

- Built a web tool to compare youtube thumbnails before videos go live.
- Cloned components based on the latest designs on youtube.com, providing useful thumbnail comparisons.
- Used the Youtube Data API to fetch live data for recently posted videos across various categories.
- Utilized: Vue.js, Vite, SCSS, TypeScript, Axios, Youtube Data API.

**synth0 - Synthesizer Instrument** ([joshhowson.com/synth0](https://joshhowson.com/synth0))

- Leveraged the Web Audio API to create a custom subtractive synthesizer using native browser technologies.
- Used Canvas to display distortion module's signal transfer curve visualization.
- Researched, then implemented the MIDI protocol to add support for keyboards instruments.
- Utilized: Web Audio API, MIDI Protocol, HTML, JavaScript.

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## EDUCATION

<b>Oakville, Ontario</b>	<b>Sheridan College</b>	<b>2016-2017</b>
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Diploma in Software Engineering

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## SKILLS

Technologies: (*proficient*): CSS, JS, TS, React, Vue, Git (*familiar*): PHP, Node.js, C, Java, SQL, Flutter, React Native.  
Soft Skills: Critical Thinking, Attention to Detail, Leadership, Communication, Adaptability, Innovation.