

Jacob Bloom

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Languages

JavaScript / TypeScript
HTML5
CSS / SASS
C / C++
Python
SQL

Technical Skills

Web Design / Front-End
React / JSX / TSX
Web Animations
SVG / Canvas
Bootstrap
jQuery
Web Accessibility
Responsive Design
Node.js / Back-End
Express.js
Mocha / Chai
Jest / Testing-Library
MongoDB / Mongoose
Git / Microsoft TFVC
GitHub / NPM
Azure DevOps (ADO)
OpenGL / WebGL
Regular Expressions
Interpreters / Parsers

Other Skills

Graphic Design
Photoshop / Adobe CC
Customer Service
Music Production
Singing
Jazz Piano
Choral Arrangement
Choral Direction

I'm a fun, energetic, resourceful programmer with a life-long passion for JavaScript, and particularly metaprogramming and esoteric TypeScript. I've spent the last 5 years working with TypeScript/React and the MERN stack as a full-stack developer at [Anark](#).

Work Experience

2019-2024

[Anark](#) - Software Engineer III - Apps Team

Full-stack web development with focus on the front-end. I was our TypeScript SME. Product is a collaborative cloud-based content hosting platform, built for CAD content and similar manufacturing data.

- Built the client side of the File Sharing web application, which facilitates easy upload and organization of technical content using a drag-and-drop file-system UI. This was essential for our pivot to SaaS, since previously content could only be published to the platform via a native Windows app and now it could be done in browser.
- Built client side of Work Management system, giving customers an entirely new way to track manufacturing work.
- Designed and implemented a re-skin of the entire front-end, with lots of refactors along the way.
- Architected and built low-code "TemplateAPI" system, enabling clients to deeply customize the product in a safe, sandboxed environment.
- Built interactive docs for TemplateAPI with live, editable examples.
- *Technologies: Node, Express.js, React, TypeScript, Mocha, Chai, Jest, Bootstrap, MongoDB/Mongoose, Docusaurus, Bootstrap, SASS, Azure DevOps (ADO)*

2017-2019

CU Boulder - ServiceNow Student Developer

Provided support & custom-built solutions for ServiceNow, CU IT's SaaS issue tracker/ticketing system

- Built new workflows in this system to replace/improve the IT Department's legacy processes and forms.
- Oversaw development of a Node+Selenium test suite
- Developed new user onboarding course and videos
- *Technologies: ServiceNow, SQL*

2015-2017

CU Boulder - Service Center Student Lead Analyst

Provided tech support to the CU Boulder campus over the phone, via email, and online

- Built internal tooling to improve workflows

Education

University of Colorado Boulder (2015-2019)

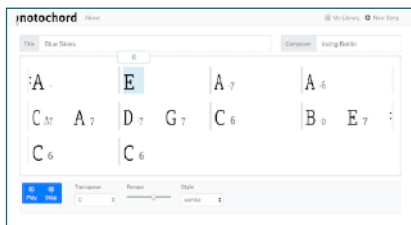
- BA in Computer Science
- Certificate in Design Technologies

Personal / School Projects

```
▶ Echo.foo()  
◀ Echo.foo()  
  
▶ new Echo()[0].bar  
◀ new Echo()[0].bar
```

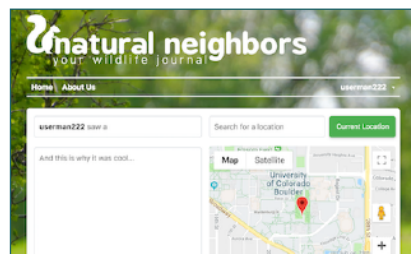
Echo

- An experiment with JS Proxies that runs in the browser console or in the terminal REPL
- It creates an Echo object. When you interact with the Echo object, it re-constructs and prints what you wrote, with full syntax highlighting
- *Technologies: ANSI color codes, Reflection, Proxies, tokenization, Mocha test suite*



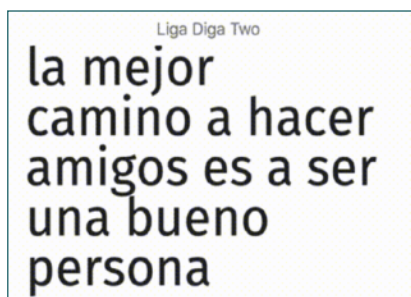
Notochord

- Web-based database for jazz song chord-sheets
- Has an interactive song editor and live playback
- Includes a domain-specific language for declaratively describing musical styles
- *Technologies: BNF Parser, MIDI, Interpreters, React, Bootstrap*



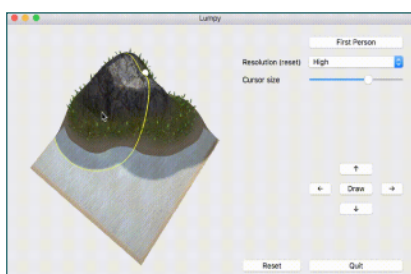
Natural Neighbors

- Agile group project in a Software Development class
- Lead Developer / UI Design
- Social Network for wildlife enthusiasts to post about animal sightings
- *Technologies: Express.js, Travis CI, Heroku, SASS, Nunjucks templating language*



Liga Diga

- A generated font that uses ligatures to convert the top 300 words from English to Spanish
- This is a fun experiment, but word-by-word translation is not a good way to translate language



Lumpy

- Final project for an OpenGL class
- Additive landmass editor with a first-person mode so you can move around the world you've made
- Includes complex mouse interactions, which are hard in OpenGL
- *Technologies: OpenGL, C++, Qt*