

Complexity slider 

[View the website to change the complexity slider! https://refactoringtutor.com/Resume/index.html](https://refactoringtutor.com/Resume/index.html)

Skill Types

Skills

data

Leif Messinger

Experience

Teaching

Teachers Assistant

Current TA for UNT computer science and engineering.

I created teaching materials for recitation sections.

I would run students programs, and if they didn't work, I would fix them and give feedback on what I did to fix the code.

Programming

[Attendance Taker lead developer](#)

Attendance Taker is a teacher tool that uses a rolling QR code to speed up attendance taking.

A teacher navigates to the webapp (hosted on the local network) and types in a class code and the list of students in their class.

If the JSON student's list is supplied, then the students can select their name from a list and the teacher can see who's absent from the class.

The class code allows the teacher to rejoin the class in case they accidentally exit the page.

It brings them to a page with a QR code that changes every second. When they scan the QR code, it checks to make sure that it was scanned within the last couple seconds by including an encrypted string in the QR code with the time the QR code was made. Then the teacher can use an included bookmarklet to run some javascript on an attendance assignment to grade the attendance.

[Refactoring Tutor lead developer](#)

As the lead developer on refactoringtutor, I was responsible for managing my capstone team to make this website. We used Svelte and nodejs for the backend.

At the time of writing, the backend is down because the backend and frontend run on Azure, so it halves the cost of the website. Tracking progress and user submitted examples used to work, but those required the backend.

The star of Refactoring Tutor is its interactable examples. I did the entire frontend and backend for this portion of the website.

The frontend uses the ace editor, a html5 js text editor library, with some custom code to highlight changed lines and turn them into buttons.

The backend uses Svelte's endpoints and some nodejs code to fetch the files generated by the example generator.

[Refactoring Tutor's Interactable Example Generation](#)

To make refactoring tutor's examples, I made a small hidden webapp to input the example code, as well as other metadata such as what message should pop up when the user selects a choice.

The generator webapp sends this data to Svelte's endpoints which then makes some files and calls a bash script to generate the rest of the files from the code supplied. The webapp is now open to users to make their own examples through the orange link in the bottom right labeled "Generator".

Since we don't have the backend working because of budget restraints, users can't login to submit them.

[Subtitle Overlay](#)

Put customizable subtitles over any game (that you can hack the subtitles out of). Subtitle Overlay is a separate process utilizing a transparent window.

IT Work (For profit and nonprofit)

Graphics

KDGN Highschool Broadcast

AA Ski & Snowboard

Gloria Shields 2019 All American Media Workshop

[Deraud-Messinger show live graphics using HTML5](#)

Hardware

3D Printing and Modeling

[The Fan Showdown S5E7](#)

My design got featured on The Fan Showdown by Major Hardware.

The video is here [I Put a FAN Inside a FAN | Fan Showdown S5E7](#)

I made it using blender. It was hilarious and it moved air.

PC Building

7 years experience building computers I've built multiple computers for myself and others. I typically build them out of pity for seeing someone using a slow and dusty computer. I've built a computer for Holmans Law, for my brother, and for my friend's brother, all for free and 100% customer satisfaction. I've built myself multiple top of the line workstations, and many workhorse linux machines to run and test my programs on.

A poor craftsman blames their tools, but that's because a poor craftsman can't afford better tools. In some ways, a craftsman is only as good as their tools. I use these computers to run data science, AI and video rendering projects which require massive horsepower.

Education

University of North Texas

Current PhD student and TA
B.S. in Computer Science
GPA: 3.736 Magna Cum Laude
CompSci Classes Average GPA: 3.942
2x President's List

Southlake Carroll High School

Computer Science 1&2 Honors Audio and Video Production(Broadcast Journalism)

Computer Science

College level computer science topics

- Data Structures & Objects
- Algorithms
- Operating systems
- Game Development using object oriented design
- Code analysis
- Web crawling / Data mining
- Cyber Security
- Computer Networking

Skills

Programming

Web Development Javascript, CSS and HTML5 React.js, Vue, Svelte, Next.js Java, C, C++, Python, Bash, Lua IT Work (For profit and nonprofit) PC building

Graphics

Adobe Premiere Pro, After Effects, Blender 3D Printing, modeling in Blender

Hardware

Ethernet Cable Crimping PC Building 3D Printing

Device repair

Soldering UPS Battery Refurbishing

Awards

Programming Awards

4th place 2018 Frozen Eagle coding tournament. (North texas high school coding competition, out of ~9 groups of 3 people)

Graphics Awards

UIL ILPC (state wide)

- 2nd place Graphics Winner 2019
- 2nd place Graphics Winner 2020

Did special graphics for:

- 1st place 2019 UIL ILPC Broadcast Intro - Mathew Goldberg
- 1st place 2019 UIL ILPC Yearbook PSA/Commercial - Jessica Wedinger

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