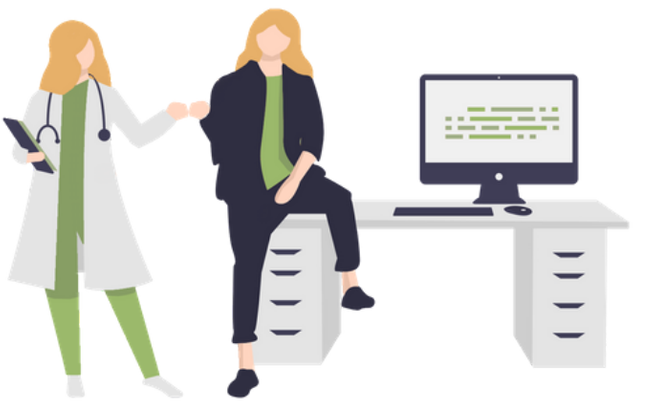
JULIET KERN

Personal Portfolio



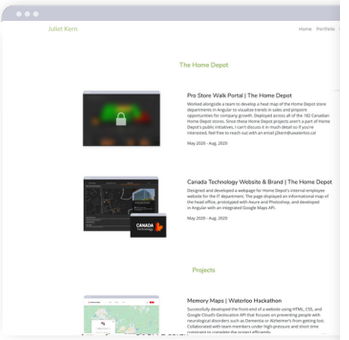
j2kern@uwaterloo.ca

My Personal Website

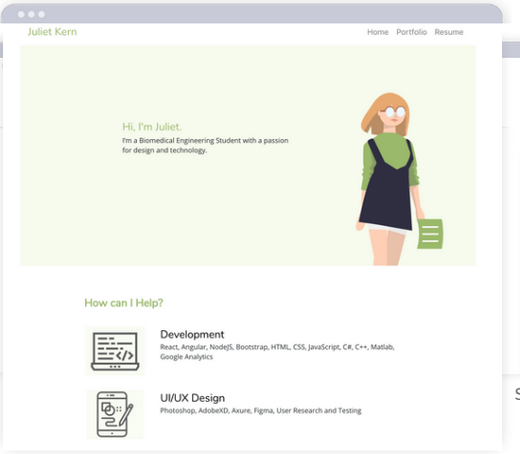
TL DR : I created my website with React to host my portfolio online and to showcase some of my personal or collaborative projects. You can learn a bit more about what I did or my process below!

Personal Website Pages

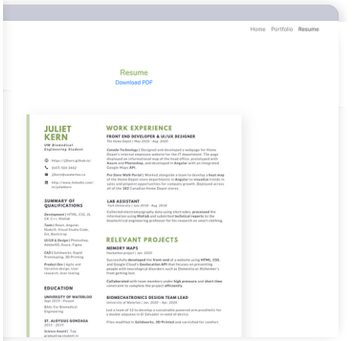
Hosted at j2kern.github.io



Sept. 2020. Portfolio Page.



Sept. 2020. Home Page.



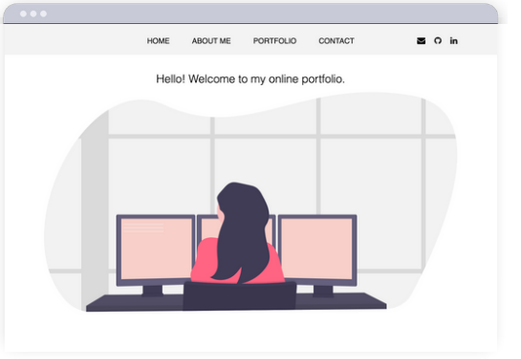
Sept. 2020. Resume Page.

Design Approach & Development

The website's wireframe was first designed in Figma, and later developed using React and React Bootstrap components and systems. Through working on my personal portfolio, I became more acquainted with frontend development since I had a chance to experiment with different frameworks and technologies.

Future iterations?

Absolutely. I consider this my ultimate agile design project because it is continuously growing and changing as I do throughout my university career. I'm hoping to improve it every chance I get (you can take a look at my first ever web portfolio attempt to the right). Some short term goals include: improve reactivity, optimizing mobile view, and adding detailed pages or case studies directly on the website for some of the projects listed on the portfolio page.



Jan. 2020. Home Page.

Canada Technology Website | The Home Depot

TL DR : Designed and developed a webpage for Home Depot's internal employee website for the IT department. The page displayed an informational map of the head office, prototyped with Axure and Photoshop, and developed in Angular with an integrated Google Maps API.

Problem space

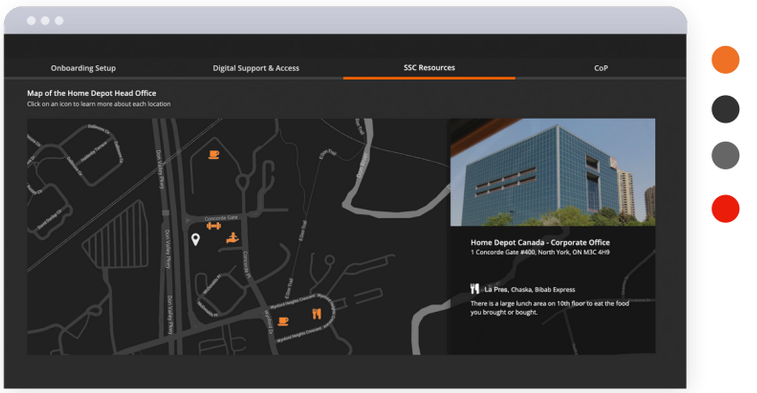
Too much written content, not very accessible for a new employee or first time site-user. This makes it difficult for new hires to see what they have available to them, and creates more work for employers.

Goal

Finding a way to display written content in a refreshing, visual way.

Research

Increasing website perceived value is directly related to how likely a user will interact with it [1]. A page suffocated with text may overwhelm the user, so using visual cues (such as maps, icons, colours) can provide the same amount of information without overcrowding the webpage with content.



A prototype option presented to the team.

Approach & Design

Decided to opt for a visual way to display the data, by targeting specific locations on the map with icons. When a user interacted with them, it activated a display popup containing the written necessary information.

Developing MVP

The MVP was developed in angular to create the necessary components. For the interactive map, I incorporated Google Maps API which would increase interactivity. Furthermore, it allowed them to access additional services such as busing information, and proximity to wherever they were located.

[1] https://www.nngroup.com/articles/perceived-value/

Canada Technology Brand Development | The Home Depot

TL DR : Helped to create the Canada technology brand by designing a logo for their website applications and company materials.

Three Responsive Logo Iterations Presented to the Team
(Expanded menu & collapsed menu versions)

Some things I had to keep in mind while developping logo iterations
Staying true to the Home Depot brand, providing fresh ideas and including a polite reminder where we're located in Canada. Compatible with both light and dark modes.

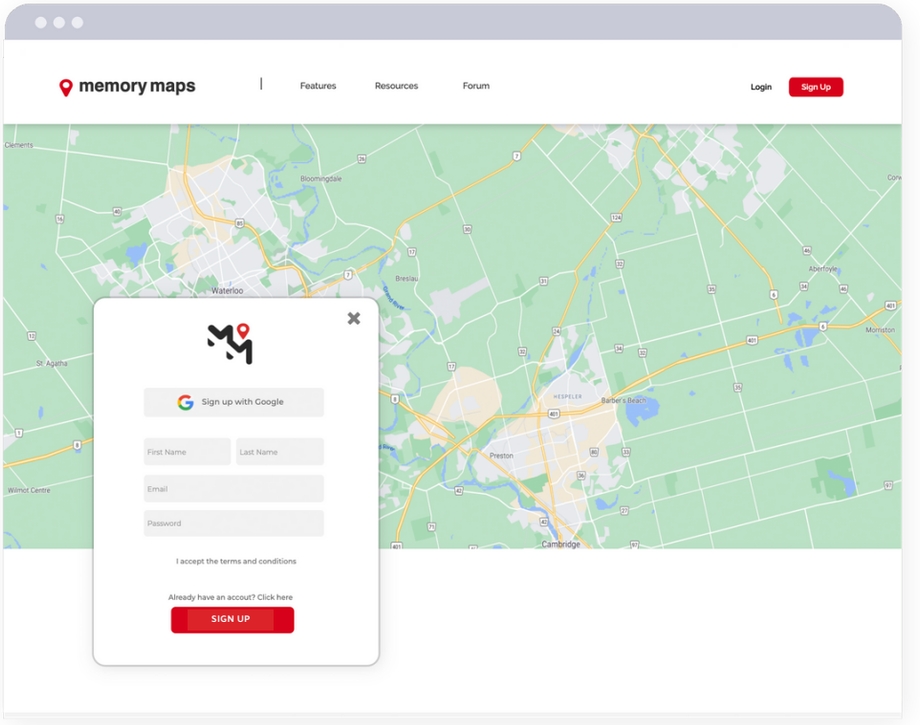
Stepping outside your comfort zone...
...is so important for any designer or developer out there. Working at Home Depot really helped to expand my thought process and really work with a new range of ideas.

Pro Store Walk Portal | The Home Depot

Worked alongside a team to develop a heat map of the Home Depot store departments in Angular to visualize trends in sales and pinpoint opportunities for company growth. Deployed across all of the 182 Canadian Home Depot stores. Since this Home Depot projects aren't a part of Home Depot's public initiatives, I can't discuss here in much detail so if you're interested, feel free to reach out with an email j2kern@uwaterloo.ca!

Memory Maps | Waterloo Hackathon

TL DR : Successfully developed the front-end of a website using HTML, CSS, and Google Cloud's Geolocation API that focuses on preventing people with neurological disorders such as Dementia or Alzheimer's from getting lost. Collaborated with team members under high-pressure and short time constraint to complete the project efficiently.



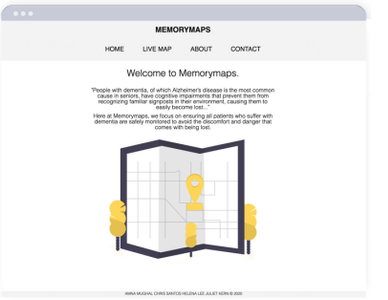
Memory Maps redesign 2020.

Approach

This web application is intended to be used by a primary caregiver or family member and the patient. The goal is to allow caregivers or family members to outline parameters which the patient can stay within. If the individual with the neurological disorder exist the predetermined radius, the caregiver receives an alert that the patient exited the parameters, and then the application draws a path with direction leading back to home or the safe zones.

Front End Redesign

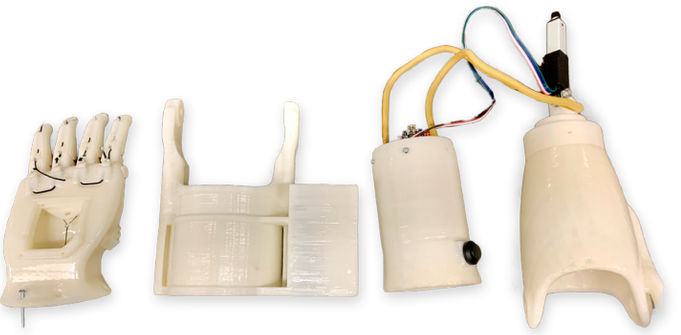
During the summer I took some time to redesign the front end of the application on Axure, including creating a logo, and redesigning the home page (take a look at the before on the right, you can see I had a comfort zone I learned and continue to learn to grow from).



Memory Maps original design.

Biomechatronics Design Team | CAD Assignment

Team Lead of Daniel's Arm project. The prosthetic is for a double amputee in El Salvador in need of a device. It is made of 3D printed material and the grip is mechanized to add an additional degree of freedom. The prosthetic is powered by rechargeable batteries, controlled by a programmed Arduino and connected to a linear actuator to allow for the gripping and extension of the fingers.

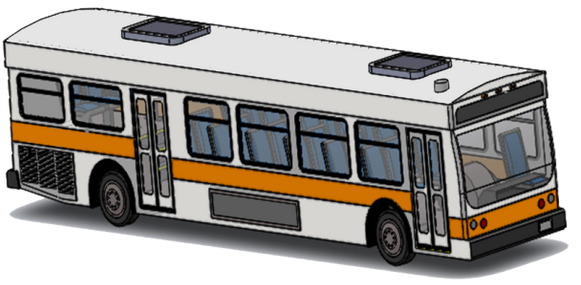


What I learned as a Team Leader

As the Team Lead, the responsibilities include organizing club members and timelines to maximize productivity and ensure group stays focused to complete the project by the desired deadline. This came with challenges, such as having to come to terms with making difficult decisions or deciding which aspects of the project should be prioritized. I overcame these challenges by ensuring there is clear communication on both ends - mine and the rest of the team. This ensures all voices are heard and all concerns were brought up and discussed.

Mi Way City Bus | CAD Assignment

Built a 3D scale model of a Mississauga city bus on Solidworks using multiple parts in assembly. Photo on right is reference to the model in photo below.



The Accessible Wallet | University of Waterloo Design Project

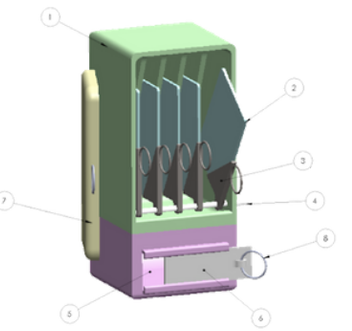
TL DR : Collaboratively designed an accessible wallet for users with arthritis to access the contents of their wallet while eliminating pinching or gripping motions, minimizing pain and stress on joints. Through teamwork and iterative design, we fabricated the wallet using Solidworks and 3D printed the prototype to conduct functional testing.

Problem space

There is a need for a device to help people with osteoarthritis and rheumatoid arthritis store and access means of payment.

Goal & Impact Statement

Design an intuitive and accessible device to be used by individuals with poor motor skills to manipulate cash, cards, and coins in a way that increases independence when completing transactions in a retail environment.



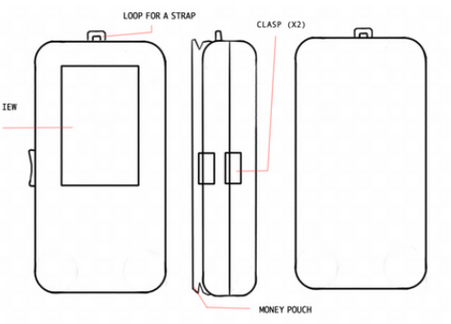
Final medium fidelity prototype before printing

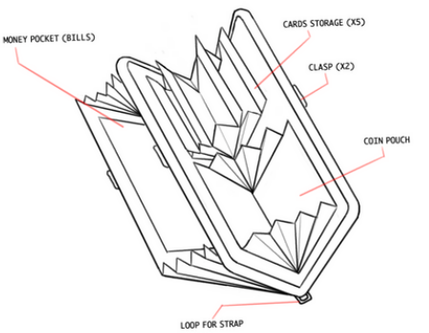
Research & Competitive Analysis

I researched wallet competitors that target people with limited hand motor skills, and analyzed their components understanding which functioned the best and which needed improvements.

Iterative Development & Concept Sketches

Below is one of the original design concepts.





Usability Testing

Conducted various tests including a test on coin storage usability and another on the force it takes to open compartments. We used quantitative metrics to ensure consistency and reliability of the data.