

# Caitlyn Kodric

Systems Design Engineering

cmykodri@edu.uwaterloo.ca

1 (226) 929-1706

linkedin.com/in/caitlynkodric

www.caitlynkodric.com

## Skills

Sketch  
Invision  
Balsamiq  
Photoshop  
GIMP  
HTML/CSS  
Bootstrap  
Javascript  
JQuery  
Solidworks  
C++/Java  
Python  
SQL/MySQL

## Education

Candidate for B.ASc

Systems Design Engineering  
University of Waterloo 2020

Introduction to Design  
Human Factors  
of Design,  
Systems, and Society  
Engineering Economics  
of Design

## Experience

Research & Developer – International Financial Data Services

May – August 2017

- ▶ Converted stored procedures to from SQL to MySQL
- ▶ Debugged application manually during QA process
- ▶ Researched, implemented, and documented features for multiple internal applications

Front End Developer – MAJiK Systems

September – December 2016

- ▶ Constructed and implemented a real time synchronous model resulting in uniform timeframe throughout app
- ▶ Created Client modules that use MAJiK's API dynamically on their framework

UI Developer – Veriday

January – April 2016

- ▶ Designed, developed, and enhanced custom websites to meet client requirements
- ▶ Optimized responsive websites for access on all devices and platforms

## Projects

AquaBicylinder – Design Project

- ▶ Created multiple sketches and prototypes using design iteration process
- ▶ Designed 3-D printed component using SolidWorks
- ▶ Documented project process using multiple resources to meet project goals

SnapTrax – Nspire, NHacks

- ▶ Worked in an agile environment to create and design online web application
- ▶ Allowed users to upload images and receive associated song matching image tags

# Caitlyn Kodric

<Bre/ak> Inequality Hacks

## Background

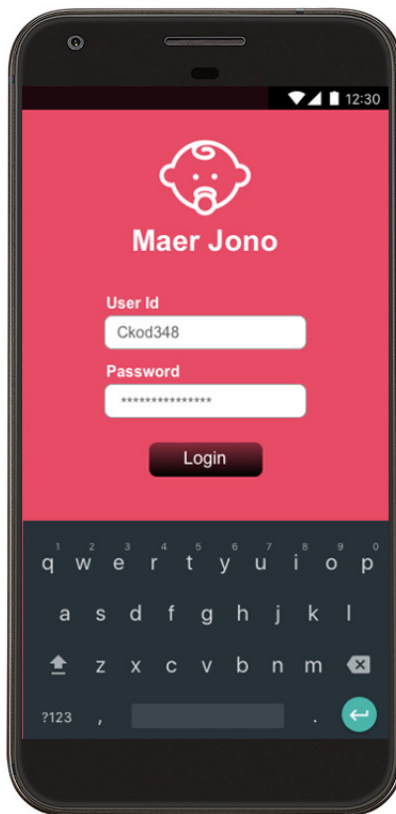
There are many pregnant woman in rural communities that **do not have the proper access to health care** supplies or trained personnel. The lack of healthcare resources can result in a high mortality rate for the mothers and the newborns. With the statistics given from Maternal, Newborn, and Child Health (MNCH) considers these patients to be at high-risk.

## Solution

In valuing time as a currency, our solution is to highlight and establish the risks associated with each patient and treating them with to treat their individual needs.

## Goal

The goal for the application is to assist the health care workers by giving them more information about specific women. The application should **improve the quality of service and infant delivery rates** for the women and their children.



## Features

Login Page keeps each workers information separate and corporation data in one place.

List of Patients with dates keeps the organization to plan the day accordingly.

Individual Profile keeps a quick update for each patient to review before giving help.

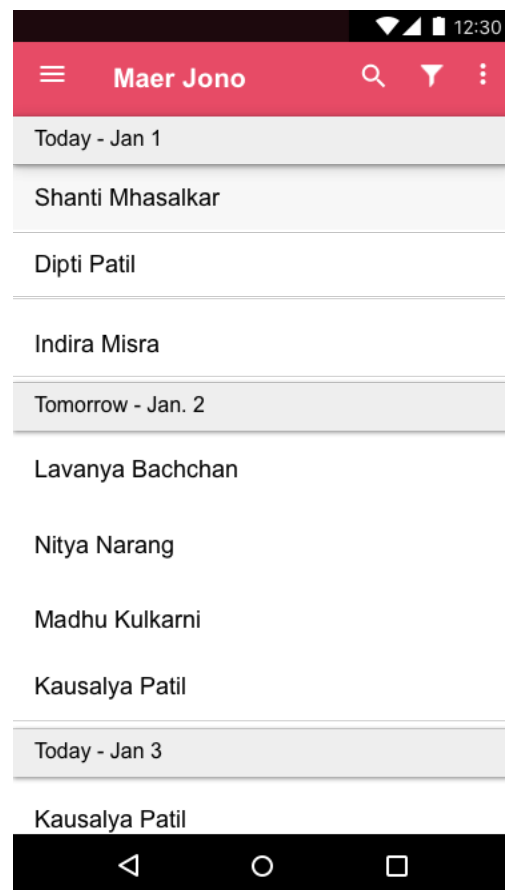
With multiple clients, map allows fasted directions to each patient for simple travel.

## Use

Simple application to organize health workers clients to simplify the process and timeline for each patient.

The workers must record patients needs, risks, health concerns for constant check-ups to store information in single location.

Application gives means of instant communication between workers and patients during emergencies.



# Caitlyn Kodric

<Bre/ak> Inequality Hacks

## Constraints

### Pregnant Women

In the rural parts of the country not all women have the skills to read and write.

At the bottom, when the patient is first met, a worker accesses their literacy and speaking.

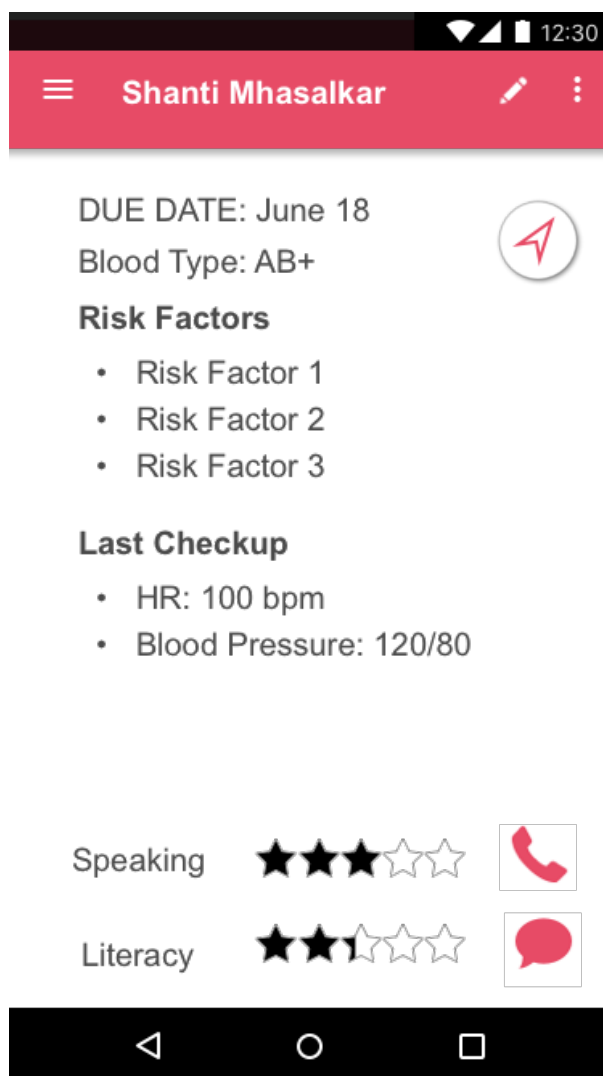
This allows for calls or messages to be sent based on the easiest communication for the woman.

## Constraints

### Health Care Workers

Health Care workers are not fully trained. They have the ability to walk through application to record and find information.

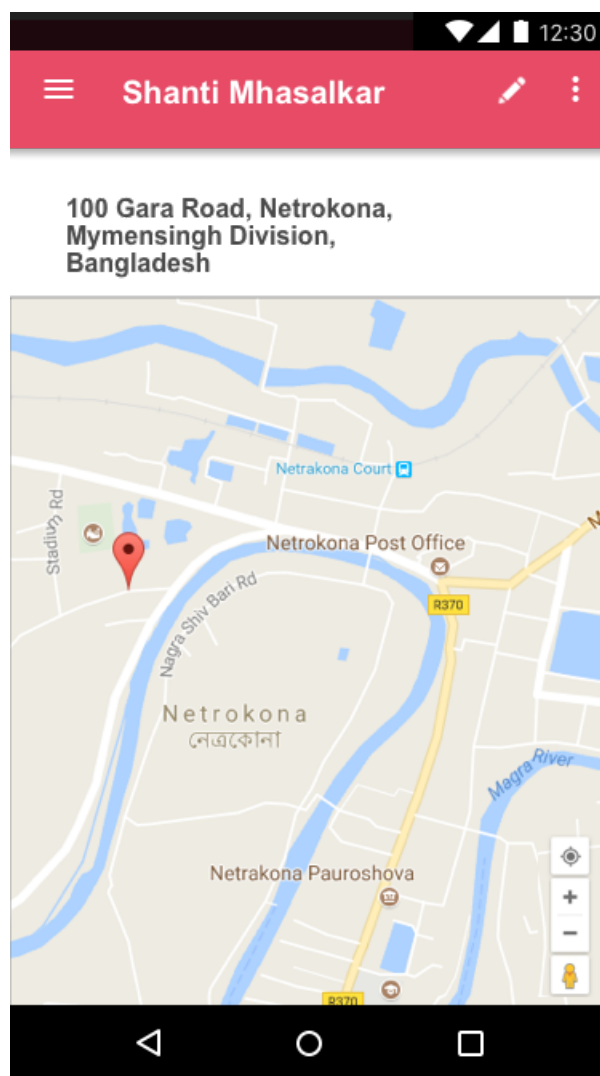
The workers must travel to the rural communities, the map can provide directions to arrive at their destination by address of patient.



Mobile app interface for Shanti Mhasalkar. The header shows a menu icon, the name "Shanti Mhasalkar", and a pencil icon. The main content area displays:

- DUE DATE:** June 18
- Blood Type:** AB+
- Risk Factors**
  - Risk Factor 1
  - Risk Factor 2
  - Risk Factor 3
- Last Checkup**
  - HR: 100 bpm
  - Blood Pressure: 120/80
- Speaking** (5 stars, 3 filled)
- Literacy** (5 stars, 2 filled)

At the bottom, there are icons for a phone call and a message.



Mobile app interface for Shanti Mhasalkar. The header shows a menu icon, the name "Shanti Mhasalkar", and a pencil icon. The main content area displays:

- 100 Gara Road, Netrokona, Mymensingh Division, Bangladesh**
- A map showing the location of Netrokona, Bangladesh, with a red pin marking the address. The map includes labels for "Netrokona Court", "Netrokona Post Office", "Netrokona Pauroshova", and "Magra River".

At the bottom, there are icons for a phone call and a message.

# Caitlyn Kodric

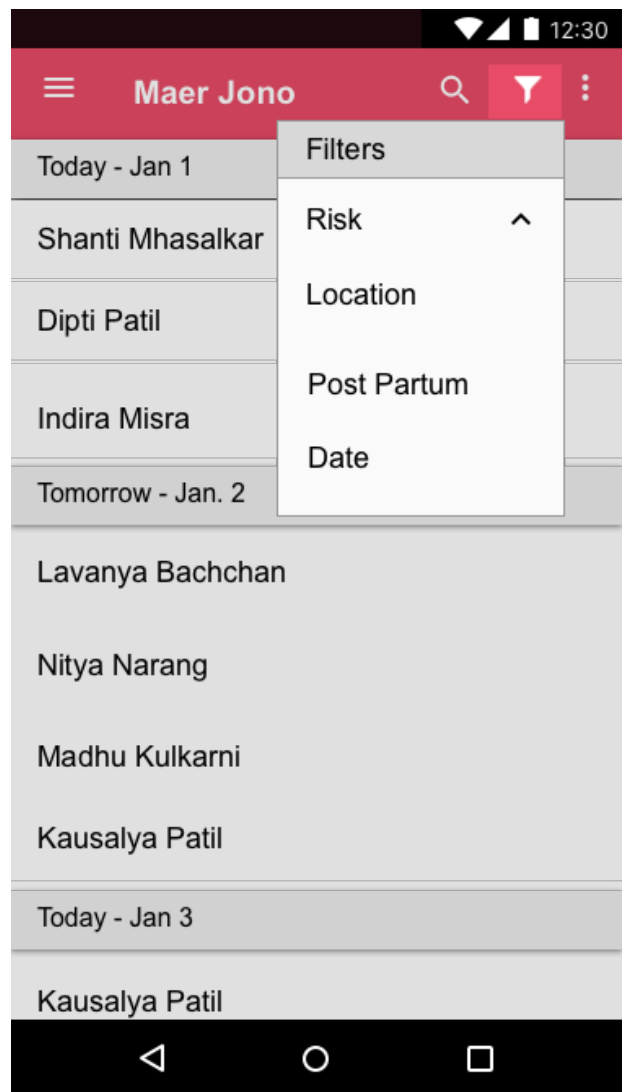
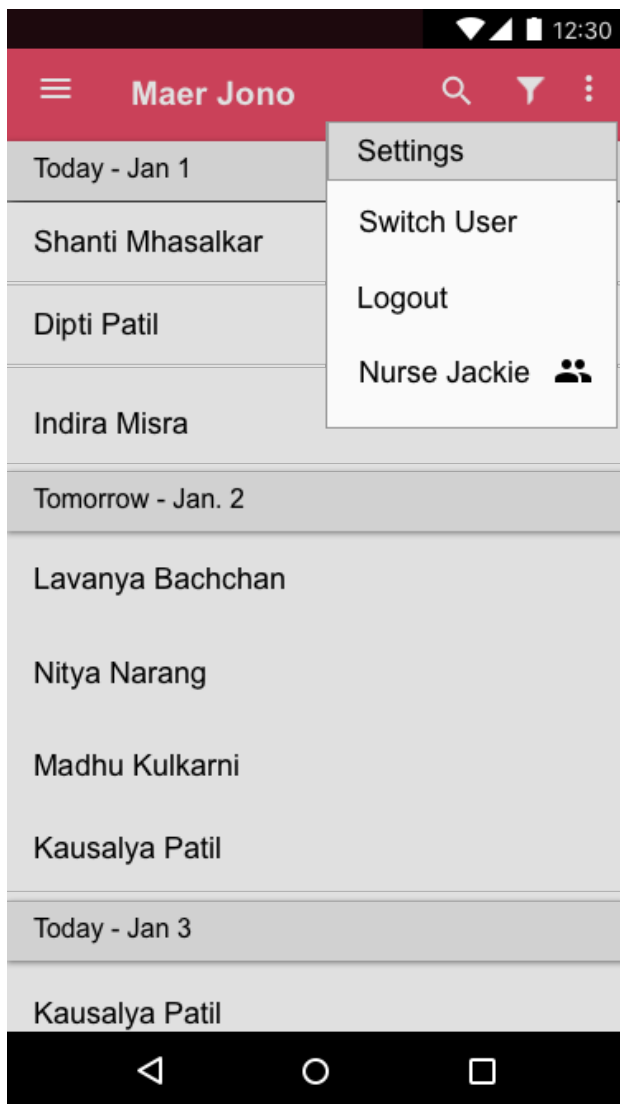
<Bre/ak> Inequality Hacks

## Menus

Settings Menu allows Health Care Workers to switch between users and/or logout when their shift is complete.

Filters menu allows Health Care Workers to switch between the order of their patients depending on their location. It is optimal to take the path that is shortest to order each patient. If rated after giving birth, a woman can be risked for post partum and get the help she needs urgently.

The pencil on individual portfolios will make the keyboard pop-up for editing their profiles.



# Caitlyn Kodric

## AquaBicylinder

### Background

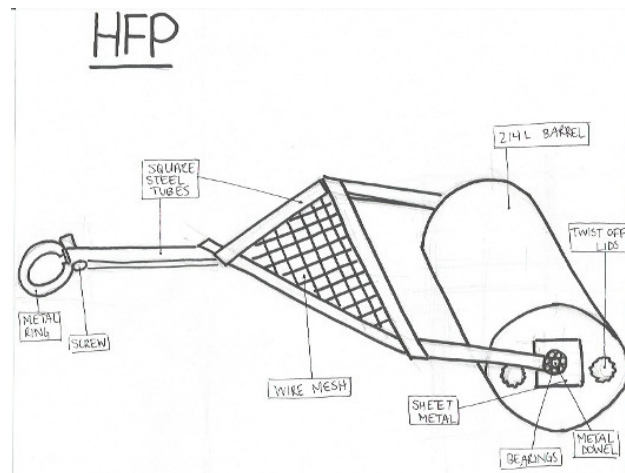
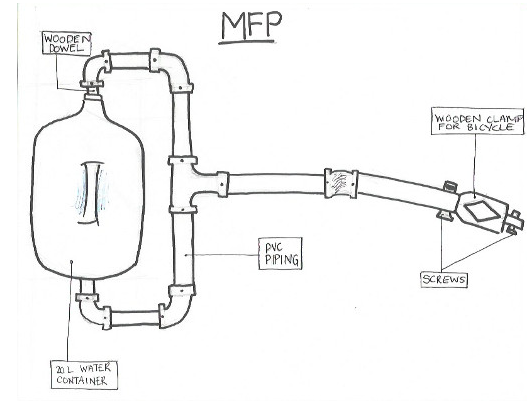
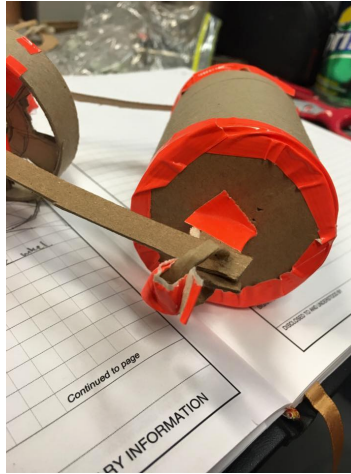
Many people in rural Uganda and Kenya **do not have an efficient, reliable system in place to access water**. Often, the population of low income families, specifically women and children, must travel by foot to fetch water from the nearest source. This task occurs by carrying jugs or jerry cans. Carrying heavy water containers puts strain on the body, resulting in health problems.

### Solution

In valuing time as a currency, our solution is to highlight and establish the factors associated with transporting water efficiently and effectively, while maintaining a healthy body.

### Goal

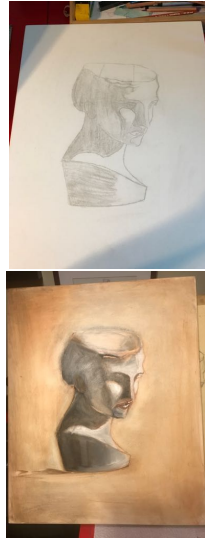
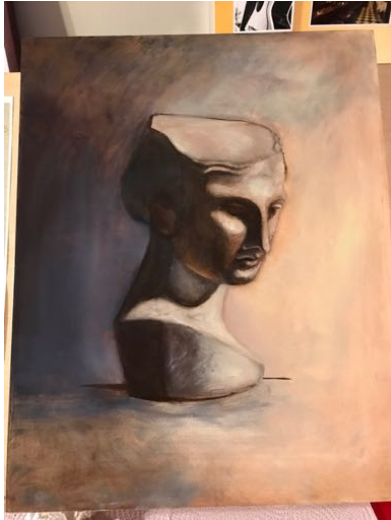
To create a **durable** device that should **reduce the negative health effects**, **decrease the time**, and **increase the amount** of water transported each trip.





# Caitlyn Kodric

## Art Pieces



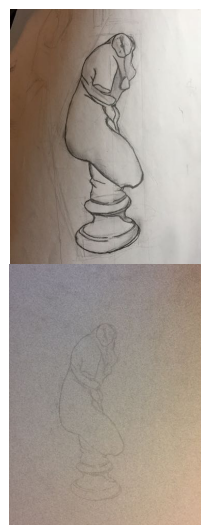
### Psyche - Charles Bargue

This project is from the drawing book of Charles Bargue. I decided to do this piece in oil paints. This process started with the outline of the statue in HB pencil to ensure proper proportioning of each section then transferring onto a smooth canvas. Beginning with the outline of features, each layer of paint was carefully placed for a statue effect starting from the darkest paints to the lightest. The colours of paints were chosen to shade the statue as if a candle was the only illumination on the face of the woman.



### Pottery

This project is from a pottery wheel class that I took during last term. During the course we used technique on the wheel to throw cylinders and make them hollow. With this process we were able to use creative ideas to create anything involving these techniques. I created bowls, a mug, pitchers, and an egg cup. First you must wedge the clay (like kneading), this is used to remove air bubbles. While the clay is on the wheel, you use your hands to pull the clay up to create a hollow cylinder giving pressure accordingly for convex and concave walls.



### Charles Bargue

This project is also from the drawing book of Charles Bargue. I decided to do this piece of work in black and white charcoal. This process also started with the same techniques as Psyche. Once this step was completed, the next step was the transfer the drawing onto the textured board. Step by step this piece came together by carefully shading from the darkest darks to the lightest lights using black charcoal. The final step was to use the white charcoal to pop out the lightest lights giving the statue texture.