



## Company Background

BurstIQ fuels trust-first digital strategies with human data. LifeGraphs® take the complexity out of managing sensitive human data, freeing organizations to build trust through hyper-personalized health, work, and life digital experiences. In an era of data abundance, LifeGraph promotes trust between organizations and the individuals providing data through blockchain-powered governance and consent. With LifeGraph you get a single source of truth and an intelligent ecosystem, helping businesses gain a deep understanding of the people they serve. Armed with granular insights, they can deliver more value to digital experiences and make an increasingly digital world more human.

## Project Description

### Problem

When a cancer patient dies or their regimen changes, thousands of dollars' worth of life-saving medicine are often left in the hands of patients and family members whose only legal recourse is to flush them down the toilet or throw them in the trash. *The cost of wasted prescription medication is estimated to range from \$2.4 to \$5.4 billion annually while an estimated 10 million prescriptions could be recycled in the United States every year.* About 58 million Americans reported not being able to afford a medication they needed, while 34 million Americans say they know someone who *died after they skipped medical treatment due to their inability to pay.* *The mortality rate for many vulnerable patients can be significantly reduced by simply leveraging the 10 million medications that can be reclaimed and redistributed annually instead of destroying them via environmentally harmful methods.*

### Solution

While pharmacists have created a patchwork of FDA requirements and state-level statutes for reusing medication, there is need for a platform combining blockchain technology and traditional software into a system prototype that incentivizes the donation and disposal of surplus medication.

### Features of the prototype:

- Work with our established charity pharmacy partner, RemediChain, using system analysis and design methods to document user stories and features.
- Build on the BurstIQ Platform, a cryptographically-protected blockchain-based database that will serve as a single source of truth for surplus medication.
- Create a blockchain-based credential for donors, surplus medications, and recipients.
- Create an immutable chain of custody for drug donations where drugs are tracked by individual through shipping to pharmacy to recipient.



- Make specific data publicly searchable while keeping individuals' identities and monetization private.
- For each function: diagram the processes, flows, and measure the total time it takes to complete each function.

Due to the complexity of this project, Mines students have been continuously adding functionality to the prototype each field session.

### Phase 1 – Summer 2021

The Summer 2021 field session team worked on the following features:

- Comprehensive User Interface
- Login Functionality
- Donation and Request forms integrated into the website
- Account Page that leads to the forms and displays donated assets

### Phase 1 – Fall 2021

The Fall 2021 field session team worked on the following features:

- Redesigned the data model and data ownership based on long-term goals
- Redefined aspects of UI in order to seamlessly connect with new data model
- Wired up the UI to the testnet server for saving and querying data
- Recipient role – Implemented functionality to request medication by submitting patient information and prescription form

### Phase 3 - Summer 2022

Primary Objectives:

- Pharmacist role - functionality to review and change status of requested medication to approve and transfer to recipient
- Pharmacist role - functionality to review and change status of donated medication to approved and make visible in inventory

Secondary Objectives

- Data analyst role – Dashboard (details TBD)



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## Student Requirements

### Team Size

4-5 students

### Location

M - BurstIQ office in Meridian for in person support

T-F – Remote with access to BurstIQ team via slack or zoom

### Skills

Entry level, basic understanding of the following:

- UI: javascript, REST, web development
- Backend: java, node.js, or other server languages
- Data science: databases, SQL

### Student Benefits

Students will get experience working with a growing, start-up company based in Denver.

BurstIQ is in growth mode, and we are looking for highly motivated, tenacious students that take initiative to solve problems. Post-project opportunities may be available for the right students to join our growing team.