MICHIGAN STATE
UNIVERSITY

Beta Presentation
Surgical Needle Tracking

The Capstone Experience

Team Stryker IST

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From Students…
     …to Professionals

Project Overview

- Stryker is a global leader in medical technology
- Surgeons utilize many instruments throughout a procedure including needles which are accidentally being left inside patients
- Includes a needle detection, tracking, and documentation solution that should prevent lost needles and streamline procedures
- Medical professionals can utilize this software through the accessibility of an iOS application

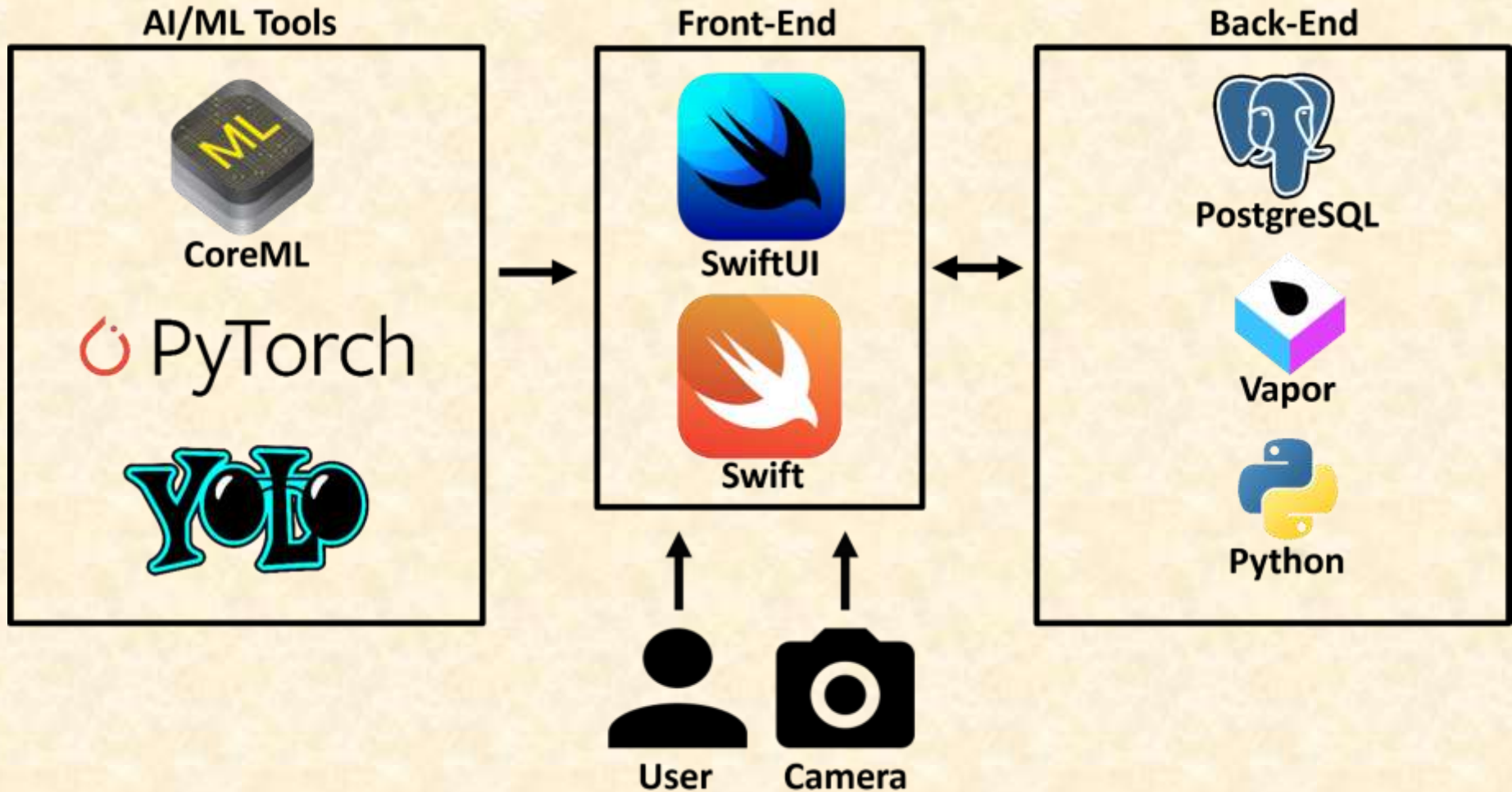# Team Member's Technical Tasks

Technical Tasks Assigned
- Eric Redmon
  - Surgery Details Database
  - Backend to Frontend Connections
  - Analytics
- Brendan Niles
  - Scheduling
  - API Connections
  - User and Surgery Database
- Joseph Renas
  - User Management
  - Surgery Management
  - Surgery Workflow
- Eli Asmar
  - Needle Tracking
  - Server Deployment
  - Model Training
- Ricky Huang
  - Model Training / ML Conversions
  - Camera View
  - Pre-Op Checklist
- Tyler Mirabitur
  - Camera View Layout
  - Camera View Log
  - Camera View Features

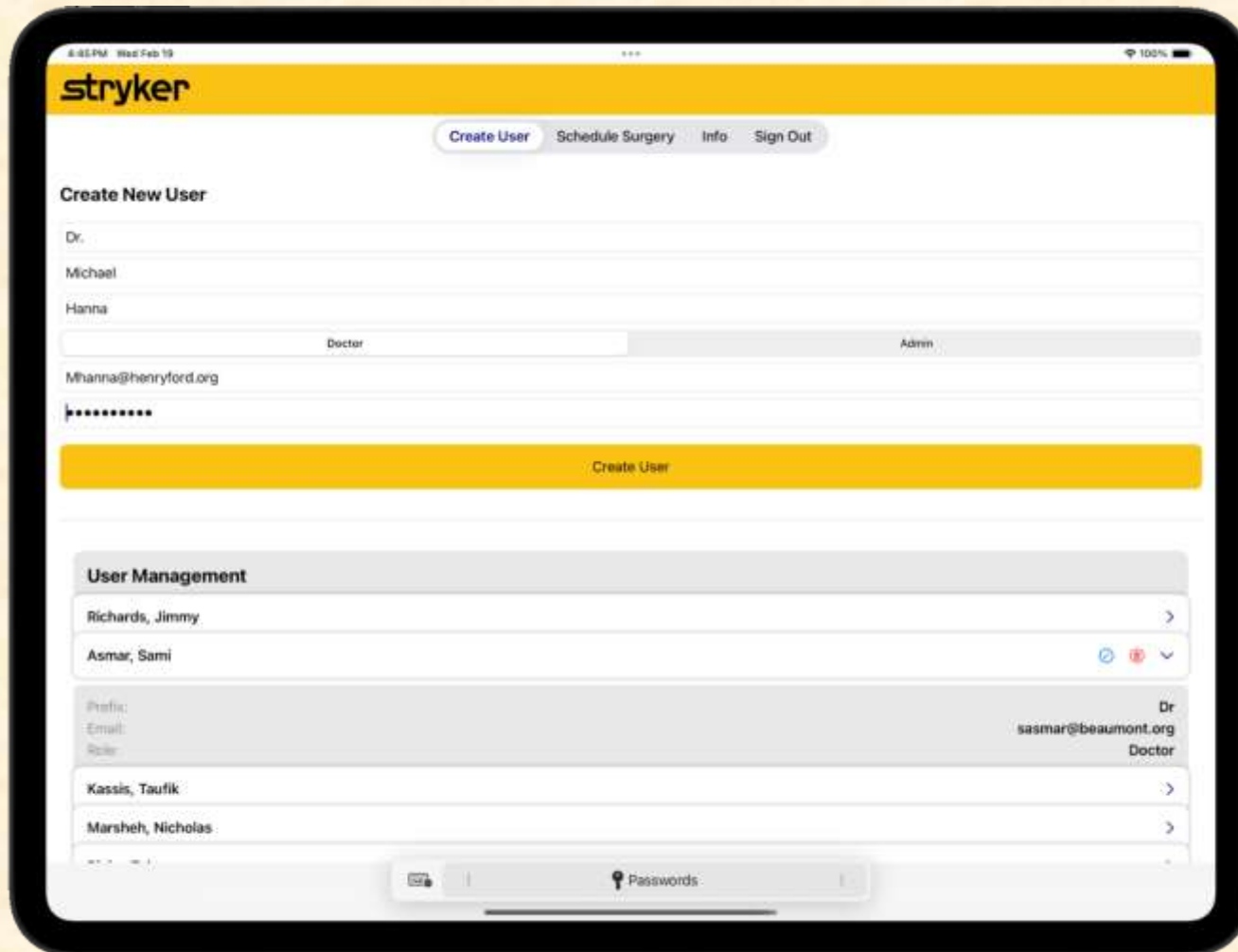Technical Tasks Completed
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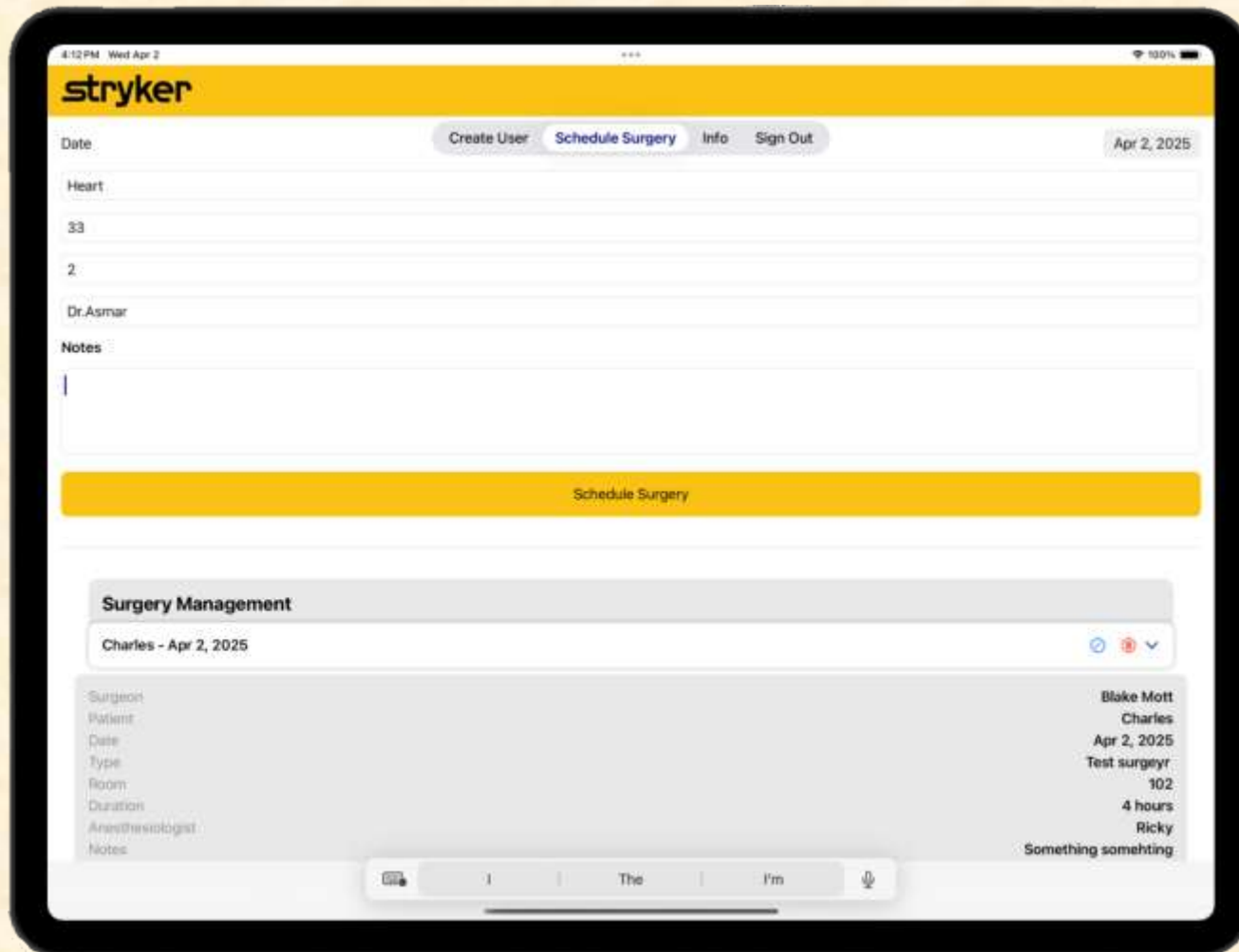 - Camera View Log
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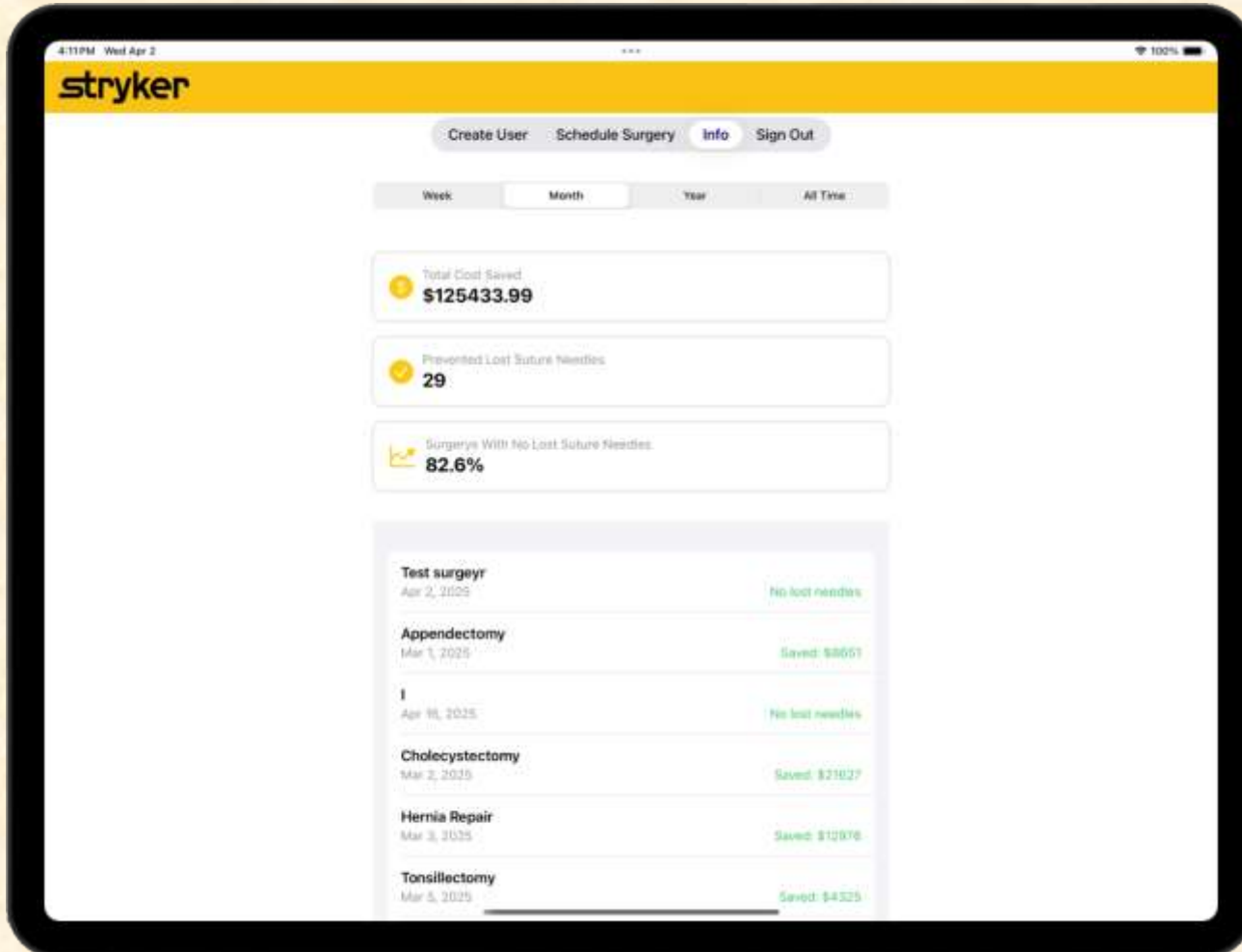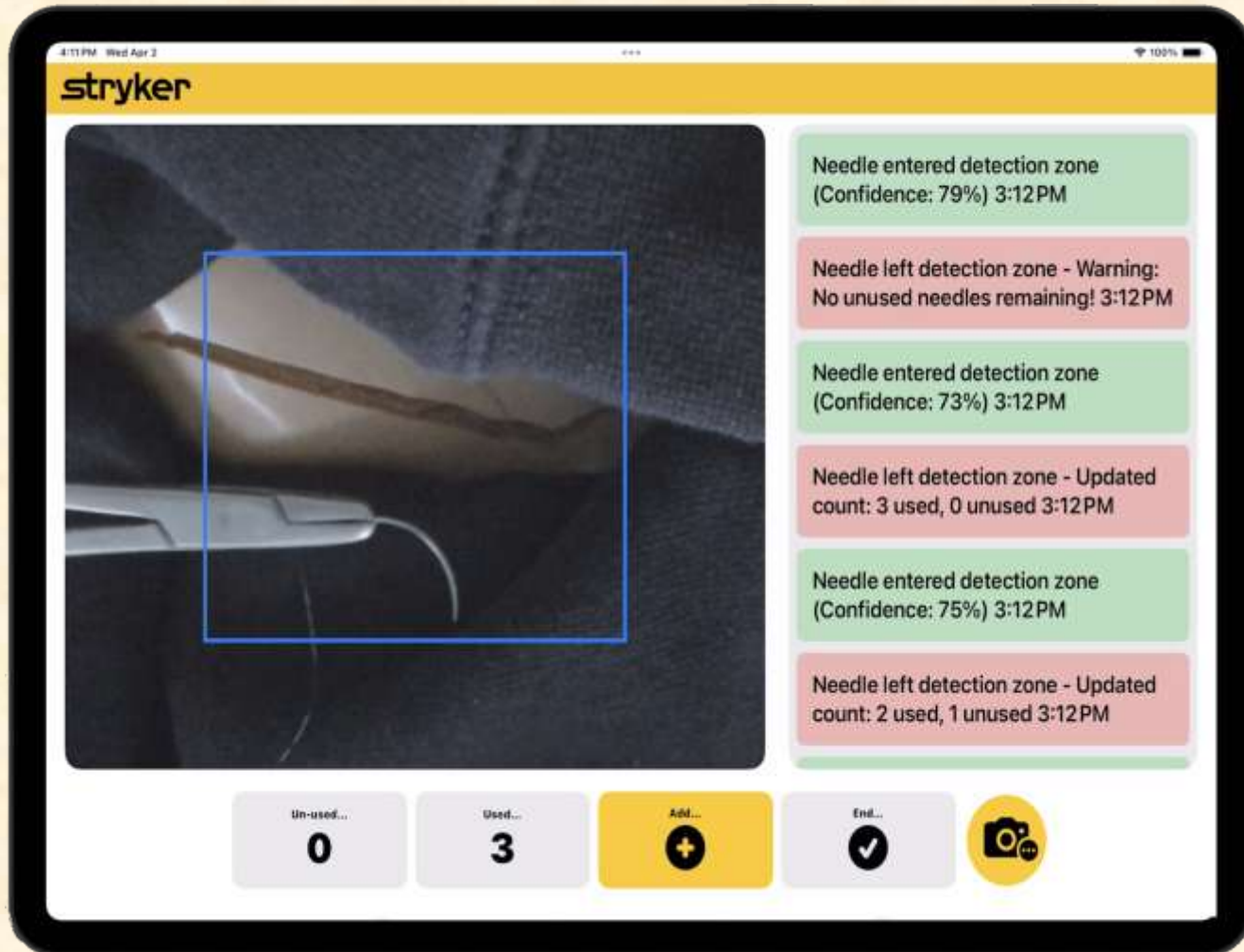
System Architecture

Create and Manage Users

Schedule and Manage Surgeries

Analytics

Surgery View

What's left to do?

- Features
- Stretch Goals
  - Improve the model
  - Emergency Surgery
- Other Tasks
  - UI Improvements

Questions?