MICHIGAN STATE UNIVERSITY

Beta Presentation Surgical OR Instruments and Needle Tracking

The Capstone Experience

Team Stryker IST

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From Students... ...to Professionals

Project Overview

- Retained surgical items occur nearly 12 times daily in the USA.
- Leverage AI/ML to implement real-time tracking of surgical OR instruments and needles
- Use manual verification checkpoints to ensure quality and accuracy in tracking records
- Generate tool status logs for audit and analytical purposes

System Architecture



Schedule

str	ryke	MRN: 1333412 Birthdate: November 11, 2024 Patient Name: Terry Warner Procedure: Appendectomy	vembe	r 2024	<i>→</i>	00
Sun	Mo	Operating Room Number: 1 Surgeon: Mia Simmons Circulating Nurse: Luke Hamilton	/ed	Thr	Fri	Sat
17	18	Status: Not Started Start Date/Time: Nov 19, 2024 at 1:00 PM	20	21	22	23
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		(1492/41)				

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Pre-Check



Live-Feed



Surgery Information Page

Wed Nov 13			Ф (ms) 6 43% 🙀
arch surgeries	Schedule Surger	y Info Settings	Add Procedure
Append	dectomy	Cholecyst	ectomy
Name	Court	Name	Court
Forcep	2	Forcep	t
Scalpel	7	Scalpel	2
Scissor	а.	Tooth Dissection Forcep	1
Tooth Dissection Forcep	π		
Edit	Delete	Edit	Delete
	placement	Edit Coronary Arte	
Knee Rep	placement		
Knee Rep None Forcep	placement	Coronary Arte Name Forcep	ery Bypass
Knee Rep	placement	Coronary Arte	ery Bypass

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Team Stryker IST Beta Presentation

What's left to do?

- Features
- Stretch Goals
 - Storing Hospital with Operating Rooms
 - Having Single Use Items Stored
 - Generating an Aggregate Report
- Other Tasks
 - iOS app UI Improvements
 - Improve Error Handling
 - Bug Fixes in Network Calls

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Questions?

