Lifting Coach

University of Utah - Senior Capstone Project - Spring 2019

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Introduction

Lifting Coach is a software system created to identify risky lifting behaviors and correct them to mitigate long-term musculoskeletal damage.

The Lifting Coach mobile application connects to sensors embedded in shoe insoles. The data gathered is analyzed to determine when risky behavior is occurring, such as lifting too much weight. The Lifting Coach website allows managers to monitor risk exposure of their employees who use the mobile app.
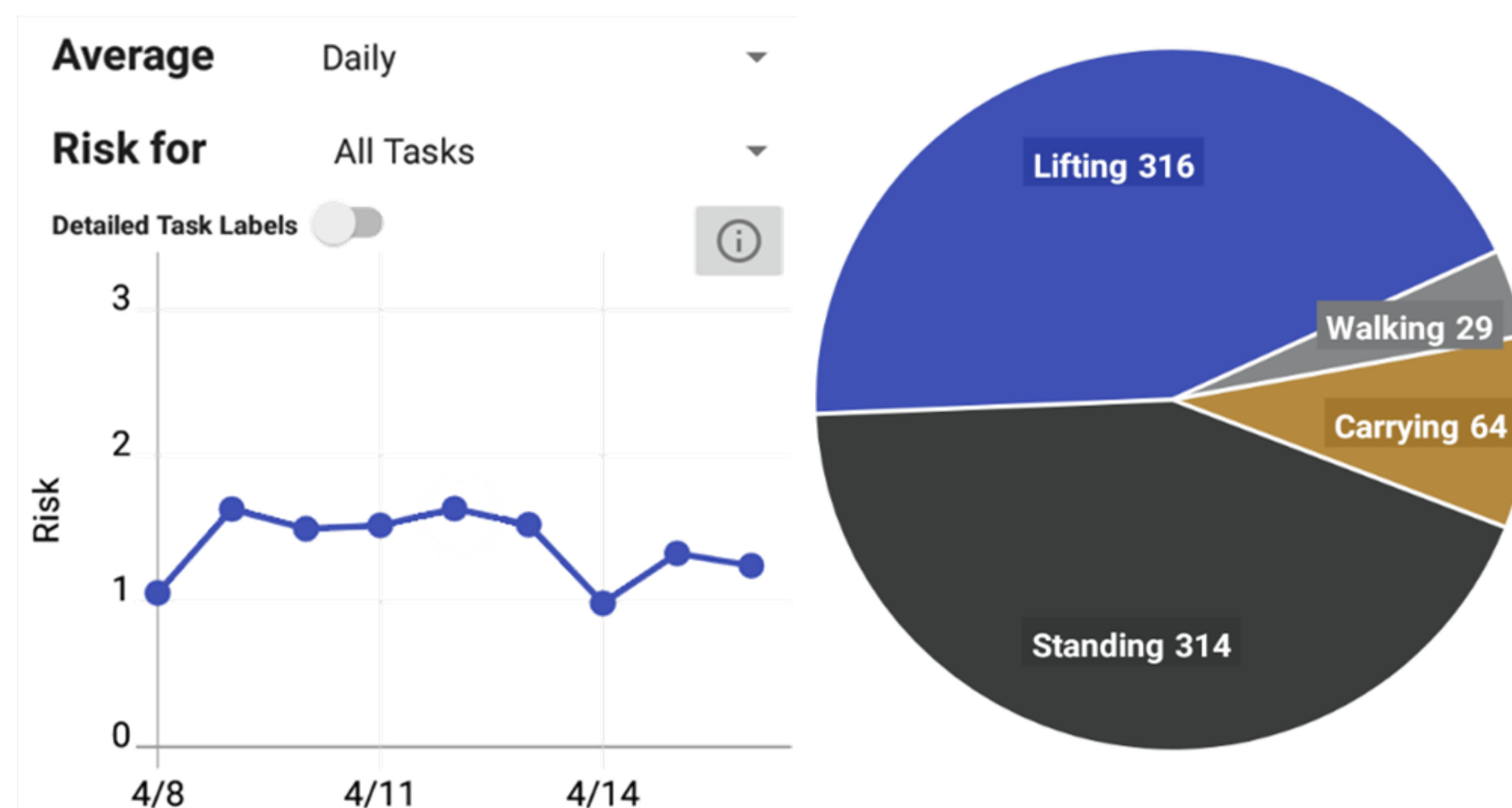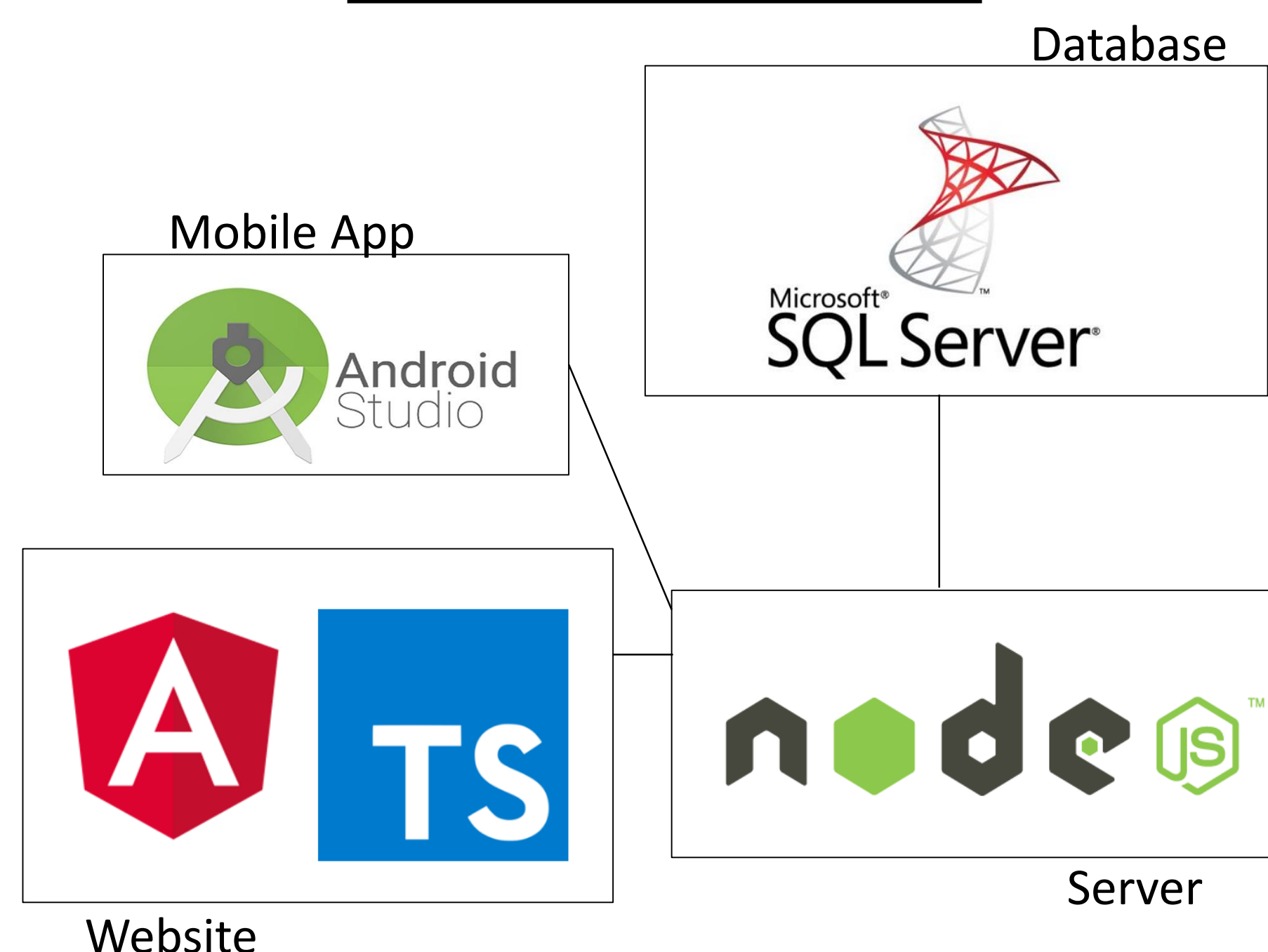
Various visualizations of risk & task information

Architecture

Key Features

Android App

-Connects to the insoles and monitors the tasks being performed for risk.

-Alerts the user when a risky task is detected and provides a correction.

-Multiple graphs for viewing your insole data

Website

-Allows managers to view trends in their employee's lifting data as well as data for individual users.

-Multiple graph formats

-Filtering by position, task, employee

User Concerns

Ethics

A mobile user can approve/remove ability for managers to view their data, so that an insole user is always in control of who can view their data. We acknowledge that there is potential for a company to abuse the data to discriminate against users; however, we hope that the health benefits outweigh the potential for harm.

Accessibility

Designed mobile app to be Red-Green Colorblind friendly

Acknowledgments

Insoles created by Professor Andrew Merryweather and Dr. Mitja Trkov with the Ergonomics and Safety Lab at the University of Utah.