SafeView Camera Monitoring System
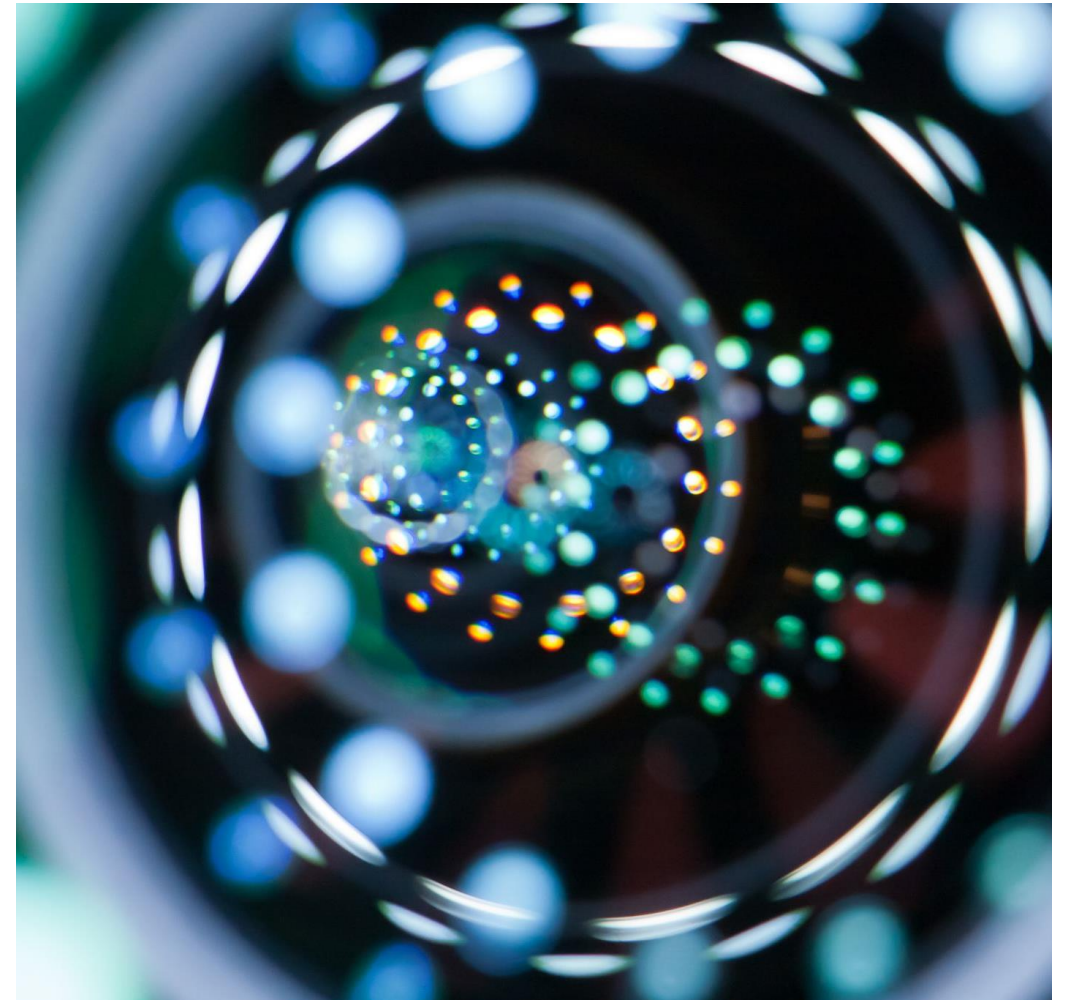
BEng Software and Electronic engineering

Project Presentation Year 4

Kenneth Mc Hugh
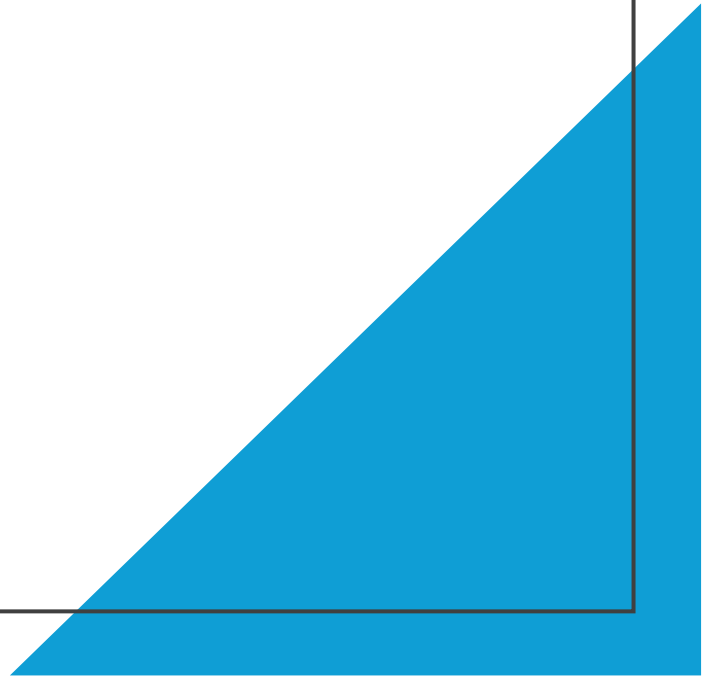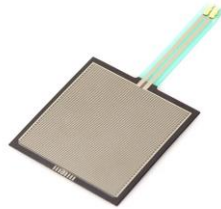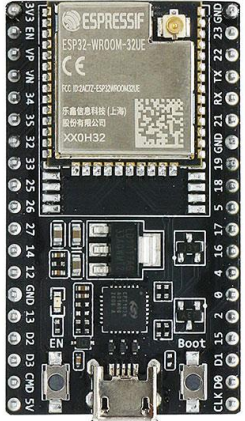
Supervisor: Pat Hurney

Introduction

- Real time camera monitoring system for vulnerable individuals.

- Certain Seizures, Heart problems, Dementia or fall risk.

- Real-time observation, Alerts and Incident data logging.

- Residential, Care homes or Medical facilities.

- Desire to improve safety for vulnerable individuals.

- Helping carers and families have greater peace of mind.

Key System Features

- Vital signs monitoring.

- Real Time Observation.

- Alerts for carers when incidents happen.

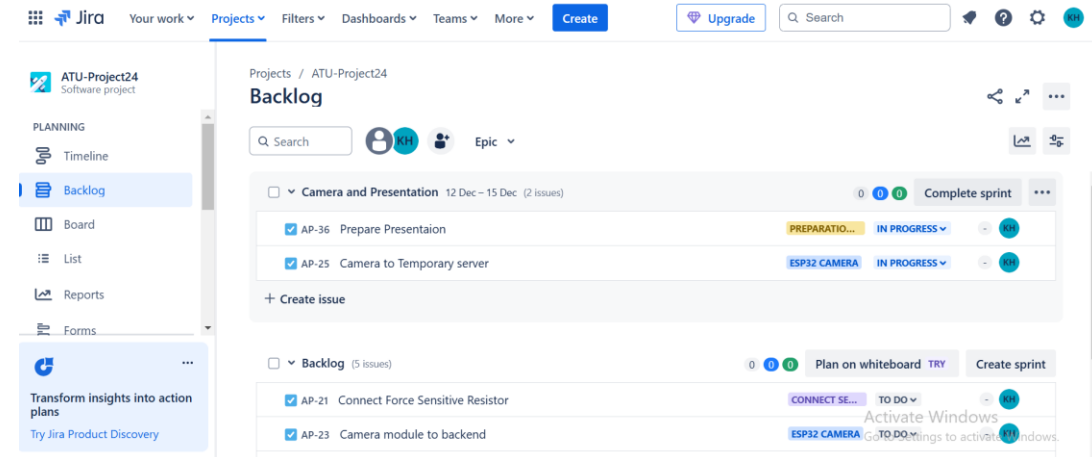- Incident data logging for medical review.

HardWare

- ESP32 Development board

- Accelerometer - MMA8451

- Heart Rate Click Board - MAX30100

- Force Sensitive Resistor

- ESP-EYE DevKit Camera

Time Management

- Maintained weekly Logs

- Attended weekly Stand ups

- JIRA Project Management tool.

- Use of Sprints.

Software Developed

Arduino IDE (C++)
- Developed sensor logic
- Developed ESP-EYE camera control logic

• Node.js
- Developed backend server
- Managed server-side logic for data processing and communication

• Express.js
- Handled HTTP POST and GET requests for sensor data
- Provided routing and framework structure for the server

Architecture Diagram