

IoT Monitoring Project

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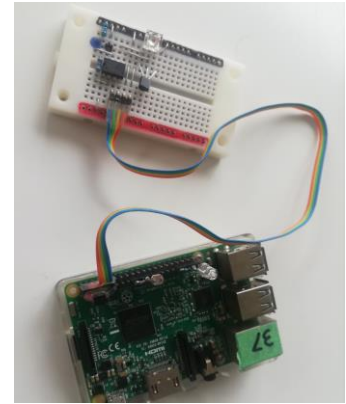
Supervisor: Steve Cosgrove Client: Andrew Hornblow



Hardware Demonstration



Team Meeting



Hardware Setup

INTRODUCTION

The purpose of this Project is to improve upon an ongoing Project for monitoring the health and behaviours of Kororā (Blue Penguin) in Taranaki created by the Client, Andrew Hornblow, and in collaboration with Steve Cosgrove and Matt Way.

The Team's objective for the Project is to update and provide added functionality to the Client's current code with supporting documentation so that the Project can be replicated.

DEVELOPMENT

The first stage of development was to meet with the Client and be introduced to the Project and its current status, this gave the Team ideas of how we could proceed with the Project and deliver an outcome that was satisfactory to the Client.

Next, we provided a proposal to include a proposed system outline of the deliverables that would be achieved for the duration of the Project. We again set up a meeting with the Client to deliver the proposal which also provided an opportunity to ask questions and/or make changes to what had been proposed, this was then signed, and the team could then get started with executing the proposed plan.

The second stage was to delegate tasks and execute the project deliverables. The Client provided devices which included a Raspberry Pi, sensor devices, and PicAxe on a breadboard so that the Team could use the hardware to

implement the code, make a connection to the cloud hosted dashboard, and run tests.

Next, the Team has updated the Python code and added functionality to the current project. Tests were also performed during stages of developing the code to verify whether the outcome was successful or needed further development.

Documentation was also created to support the IoT overview and provide a code and program breakdown for the project. A set-up guide, instructing a user how to set-up the software on the Raspberry Pi and connect to the Cayenne platform, was provided in addition to the main documentation.

The Final stage of development was to create a connection between The Things Network (TTN) and Cayenne. A setup guide was created for integrating the TTN platform and devices with the Cayenne platform to forward data from the registered TTN devices to the Cayenne dashboard.

CONCLUSION

Relevant documentation and code was completed and delivered to the client on 08/02/2022. The team was able to meet and exceed the Clients' expectations with the deliverables provided.

The Agile nature of the project's workflow had its own drawbacks but worked well with this kind of project and the Client's involvement.