**Team profile**

Using the Myers-Briggs test results, it is apparent that a group’s dynamic will be the blueprint to manage the accumulation of a project. For an assignment like this, roles must be divided equitably. Given most of us are diplomats, we have been independent in our research and study, checking in on each other intermittently. This seems to be a healthy way to move forward, as we all have a common cause, and falling behind is not an option.

Our learning styles have given us an insight into how we should be presenting our information to the team. Using tools such as word, GitHub, and PowerPoint, and keeping each other updated on MS teams ensures everyone can maintain pace and absorb information. Weekly online meetings give us a chance to explain our strategies, give insight and feedback into the assignment, and clear up anything a group member may need to understand.

Regarding our ideal jobs, we have all chosen roles that require us to build on group projects, or define challenges based on investor requirements and client demands. Our collective skillset puts us in a position to accomplish many projects, in an array of industries.

A good example of this is the Starlink project by SpaceX, currently underway and on track give developing nations highspeed affordable internet access, connecting them with the rest of the planet and adding an extra 3 - 4 billion potential ecommerce customers. A project like this requires hours of development, constant cybersecurity testing, satellite and receiver maintenance, and a strong business model, as the goal is to maintain a healthy income for SpaceX's main projects.

**Project Ideas**

**Jake**’s project is a household solar powered hydroponic garden. He aims to provide a sustainable means of urban farming to all households, in turn reducing carbon emissions by using a solar power source, spending less time commuting to the grocers, and promoting healthier habits at home.

The parts for this can be easily sourced through hardware suppliers, and raspberry pi provides a multitude of components that can be added depending on the clients’ needs. I believe this can be automated even further by using pH sensors to trigger peristaltic pumps.

**Stephen**’s project is a light fidelity system that can provide highspeed internet access to devices within its field. The security involved is superior to that of current wi-fi technology, by providing a smaller interaction area, using the physicality of a premises as signal boundaries. I believe venues utilising this would have an edge in the industry, allowing data transmission to be a lot less of a hassle.

**Akhil**’s project is an affordable home automation system using raspberry pi as the hardware to centrally control lighting, climate, and entertainment. This will allow more households access to such technology, as it drastically decreases the setup cost. It will allow user to control different settings using an app for iOS and Android. The versatility is ideal, and provided the user has finite areas they wish to control, raspberry pi would not require too many add-ons.

**Jack**’s project is an educational app that aids children in mathematics using time-based tests. Simple equations are randomly generated upon completion of the previous equation. This is built using Swift in the program XCode, available to mac users. The application can be used on any apple device, allowing at home as well as in class learning activities to be done in very little time. If this is applied using a more versatile language, it may become accessible to a broader audience.

**Alan**’s project is a hybrid that allows restaurants to incorporate inventory, reservations, and ordering systems, giving a streamline interface for customers as well as staff. Hospitality specific technology is required, such as a customisable reservations system and cloud-based inventory that interacts with predicted guest numbers. Due to volume and hardware, an efficient language such as c or java is necessary to communicate between all apps involved. Security is also a major factor, as guest information and bookkeeping involved spans many aspects of restaurant operations.

**Group project**

As a way of incorporating our ideas, I would suggest building on the in-home systems, and scaling them small businesses. For example, a community hub with a café that sources most (if not all) of its produce in house. The hydroponic environment can be controlled inexpensively using raspberry pi sensors to manage climate and humidity, as well as alkalinity of soil. Creating a community-based farm, would allow a closed system for local users to log in to the li-fi network, using a private cloud or IaaS only available through this to access information, and keep track of crop inventory. Education for this can be incorporated, using a mini garden to educate children in agriculture, by giving them simple methods to track their plants’ growth and giving the option of remote fertalisation.