**Summer Enrichment Project Schedule**

**Team Working Hours:**

### **Jonathan and Brett**

Monday: 9: 00 AM - 4:00 PM (7)

Tuesday: 8:00 AM - 3:00 PM (7)

Wednesday: Remote

Thursday: 9:00 AM - 4:00 PM (7)

Friday: 8:00 AM - 2:00 PM (6), 2:45 PM (presentation)

### **Rafael**

Monday: 6:10 am to 8:40 am, 5:20 pm to 7:50 pm

Tuesday: 6:10 am to 8:40 am, 5:20 pm to 7:50 pm

Wednesday: 6:10 am to 8:40 am, 5:20 pm to 7:50 pm

Thursday: 6:10 am to 8:40 am, 5:20 pm to 7:50 pm

Friday: Remote

**Weekly Meeting Time:**

Thursday: 9:00 AM

In the Weekly meeting, we will discuss on the progress made in the prior week. What you will be working on in the next week. If you have any doubts or concerns feel free to drop me an email.

**Shahbaz Hours:**

Generally available 9:00 AM - 4:00 PM on weekdays.

**SCHEDULE**

Week 1(May 27th - May 31st): Reading CHI Research paper and understand the project

Week 2 (June 3rd - June 7th): Building Fundamentals with Python

Week 3 (June 10th - June 14th): Understanding PyGame with a Simple Project

Week 4 (June 17th - June 21st): Research Specific Tasks

Week 5 (June 24th - June 28th): Research Specific Tasks

Week 6 (July 1st - July 5th): Research Specific Tasks

Week 7 (July 8th - July 12th): Research Specific Tasks

Week 8(July 15th - July 19th): Poster Presentation preparation

**Reading the CHI Research paper and understanding the project:**

I want you guys to create a summary by the end of the week to highlight the overview, methodology, weaknesses, and strengths.

**Building Fundamentals with Python:**

In this week you guys will be programming a simple Library management systems with classes such as Books, Members, and Library.

These classes would have methods update(), borrow\_book(), return\_book(), get\_borrowed\_books()

add\_book(), remove\_book(), search\_book(), add\_member(), remove\_member(), search\_member(), borrow\_book(), return\_book(), check\_overdue\_books(), display\_all\_books(), display\_all\_members()

This project will give you a good foundation in object-oriented programming.

**Understanding PyGame with a Simple Snake Project:**

In this week you would be programming a snake game with the help of PyGame. The objective here is to make you comfortable working with PyGame.

**Research Specific Tasks - P3:**

1. Data analysis and Data Cleaning
2. Clustering and Unsupervised Machine Learning.
3. Vizualisations using PyGame and matplotlib
4. Data Filtering

**Research Specific Tasks - P4:**

1. Data analysis and Data Cleaning on clusters
2. Designing Fuzz Probe combinations
3. Designing Fault Trees and minimal logic functions
4. Visualization of fault tree using PyGame.

**Research Specific Tasks - P5:**

1. Learn about Microservice architectures.
2. Learn about MQTT through a simple project.
3. Implement a handshake microservice (on-entry) that talks through the MQTT protocol to retrieve data from a system.
4. Implement a similar handshake (on-exit) that talks through the MQTT protocol to update the system with new data.

**Poster Presentation preparation:**

This week would be dedicated to preparing for the poster presentation on July 24th.