

EE/CprE/SE 491 WEEKLY REPORT 05

2/28/22 - 3/06/22

Group number: 14

Project title: Machine Learning for Human Biometrics

Client &/Advisor: JR Spidell & Professor Akhilesh

Team Members/Role:

Ritvik Maripally: Security Manager

Ron Mei Hang Teoh: Database Manager

Yee Shen Teoh: Hardware Manager

Zi-Jan Wong: Machine Learning Manager

Nathanael Morris: Machine Learning Manager

○ **Weekly Summary**

Identified and strengthened several database use cases, and discussed about the security concerns of biometric data transfers.

○ **Past week accomplishments**

- Ron Mei Hang Teoh: Worked on identifying different use cases of the database. After discussing with the client, we identified several additional use cases of the database and revised some of the already existing ones.
- Ritvik Maripally: More stup with cybersecurity measures, planning with Ron on database measures and data allocation on Ultra96 to keep data safe
- Yee Shen Teoh: The Ultra96 board has been delivered. I downloaded putty and worked with the Ultra96 board to check if the wifi connection works. After that, I also work on getting more familiar with the board by connecting to the IP address of the board, and running the example project provided. Besides that, I also look through more videos about Ultra96.
- Zi-Jan Wong: Installing multiple modules such as cv2, pandas, tensorflow, etc in Anaconda for Jupyter Notebook dataset to try running from top to bottom without errors.
- Nathanael Morris: Worked on getting a Jupyter Notebook dataset to run from top to bottom and figuring out how to use that data in the REMoDNaV algorithm.

○ **Pending issues**

- Ron Mei Hang Teoh: N/A
- Ritvik Maripally: NA
- Yee Shen Teoh: N/A
- Zi-Jan Wong: N/A

- Nathanael Morris: N/A

○ **Individual contributions**

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Ron Mei Hang Teoh	Created bounce diagrams for database	6	30
Ritvik Maripally	Ultra96 isolation methods and presentation	6	30
Yee Shen Teoh	Getting familiar with the Ultra96 board (download putty, check wifi connection, running example project). Looking at videos about Ultra96.	6	30
Zi-Jan Wong	Installed modules to run Jupyter Notebook dataset.	6	30
Nathanael Morris	Getting familiar with REMoDNaV algorithm and running it on eye movement data	6	30

○ **Plans for the upcoming week**

- Ron Mei Hang Teoh: Work on creating more detailed bounce diagrams and identify the permission required for the system to access the database.
- Ritvik Maripally: Working more closely with database guy (Ron) and security measures in ultra96.
- Yee Shen Teoh: I will be working on some projects that involve machine learning and image processing to get familiar with different parts of Ultra96 that we will use for our senior project.
- Zi-Jan Wong: Inject larger dataset for machine learning to run on.
- Nathanael Morris: To continue practicing with REMoDNaV and getting it to work with the eye movement data.

○ **Summary of weekly advisor meeting**

- Updated the advisor on our project requirements and constraints.
- Most of our requirements and constraints can be broken down into smaller pieces for simpler definition.
- The advisor mentioned that the notes taken during the client meeting can be also used to create the project requirements and constraints.