|  |
| --- |
| *A picture containing person, child, young, indoor  Description automatically generated* |

Research Project Initiation – SIT723

|  |  |
| --- | --- |
| **Student Name:** | Oscar Wu |
| **Supervisors’ Names:** | Daniel Ma |
| **Project Title:** | Machine-Learning COVID-19 News Bias |
| **Student Details** | |
| **Course:** | SIT723, MIS770, SIT718, SIT719, SIT740, MIS771, SIT720. SIT741, SIT772, SIT742, SIT743, SIT764, SIT744, SIT782, SIT787 |
| **Research Experience:** | **Casual Research Assistant 04/2021-present**  Professor Gleb Beliakov, Deakin University   * Multiobjective optimization problems (MOP) and multiobjective evolutionary alogrithmn. Coded famous test problems with benchmarks, such as ZDT1, ZDT2, LDTZ1, kursawe, etc. * Studying unconstrained and constrained single-, multi-, and many-objective optimization algorithms Such as NSGA-II, MOEA/D. * Testing different algorithms with problems from coded problem list. These test problems can be modified and extended to variable dimensions, showing visualization: objective space, paretofront, nadir point etc. * Using performance indicator IGD+ and hypervolume to compare and contrast them with budget: number of iterations and number of test function evaluations. * Building machine language pipeline, calculation happened in Python environment, a bunch of jobs created by bash scripts, evaluations using C++ programming.   **Casual Research Assistant**  **03/2021- 11/2021**  A/Prof. Gang Li, D2I Research Centre, Deakin University     * Studying machine learning project, linear algebra, pattern classification, NLP * Using LaTeX to prepare literature review and Machine project * Studying factorization machine and reporting to the team on weekly basis * Implementing tensor decomposition on factorization machine to enable it to map calculation into low dimension space along with features interaction |
| **Technical Skills:** | **Senior Data Analyst 06/2021-10/2021**  D2I Melbourne City Pedestrian Count Project   * Web crawling to “City of Melbourne Open Data” and processing meta data. * Implemented python to build Open Data API and repository. * Used NLP for meta data and topic modelling * Awarded one of top projects and expo presentation * [Github](https://github.com/D2I-Melbourne/POCOM) Repository: D2I City of Melbourne (Owner) |
| **Research Units related Information** | |
| **SIT723 Target Grade:** | HD |
| **Expectations from the unit:** | To improve skills of conducting research |
| **Will you continue to Research Project B (SIT724)?** | No, because this is my final trimester. |

# Project Requirements

## Research Integrity Training

## Graphical user interface, text, application Description automatically generated

## Deakin ethics quiz attempt

Graphical user interface, text, application, email

Description automatically generated

# Project Management Requirements

## Overleaf Repository

[Overleaf Link](https://www.overleaf.com/7287954829kwpvykchybcg)

## Project Resources Repository

[Github repo](https://github.com/wuyoscar/SIT723-Reserach-Project-A)

## Worklog

[Repo\_Worklog](https://github.com/wuyoscar/SIT723-Reserach-Project-A/blob/master/Week1/ontrack_1.1p/1.1P-resources/1.1P-Worklog_Template.xlsx)

## Project Tentative Plan

|  |  |  |
| --- | --- | --- |
| Module | Suggested Deadline | Agreed Deadline |
| Literature Review Draft | End of Week 3 | End of Week 4 |
| Literature Review | End of Week 4 | End of Week 5 |
| Research Design | End of Week 6 | End of Week 6 |
| Development Sprint and Evaluation Results | End of Week 9 | End of Week 9 |
| Research Report Draft | End of Week 10 | End of Week 10 |
| Final Report and Learning Summary Report | End of Week 12 | End of Week 12 |