NIC CA2 Group Project Minutes

**Group:** Group M

**Members:** Hugo Hewitt, King Lok Lam, Yifeng Wang, Daji Liang, Usama Sajjad Ahmed, Priyanka Naithani

**Minutes:**

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| Date | Discussion | Attendees |
| 26/11/2023  Online meeting at 11:30 | -Introductions, getting to know each other  -Discuss the problem  -Understand what is needed  -Create GitHub and setup basic workspace  -Next meetings decided:  -Online meeting 28/11/2023 at 18:00  -In person meeting Innovation Café starting at 15:30 to 16:00 | Hugo Hewitt,  King Lok Lam,  Yifeng Wang,  Daji Liang,  Usama Ahmed,  Priyanka Naithani |
| 28/11/2023  Online meeting at 18:00 | -Discussed how to progress  -Research into different algorithms  -Algorithm suggestions | Hugo Hewitt,  King Lok Lam,  Yifeng Wang,  Daji Liang,  Usama Ahmed,  Priyanka Naithani |
| 30/11/2023  In person meeting in the Innovation centre at 16:00 | -Discussed the possible options for algorithms  -Discussed what we have done, including some coding by Lam and some research into methods by Usama | Hugo Hewitt,  King Lok Lam,  Yifeng Wang,  Daji Liang,  Usama Ahmed |
| 05/12/2023  In person meeting in the Washington Singer building at 13:30 | -Different approaches discussed  -Discussion about the Implement NSGA-II  -Compare algorithms, research at least 3 others  -Write background of TTP(Travelling Thief Problem)  -Discussion about experiments to improve algorithm  Task Delegation:  Ahmed -> Intro and Traveling Thief problem description.  Daji, Priyanka, Yifeng, Usama -> Comparison of other techniques (NSGA-II, ACO, greedy, particle swarm, MOEA/D)  Hugo, Lucas -> Writing NSGA-II implementation (Hugo: Knapsack, Lucas: TSP)  Next meetings decided:  -Online meeting 07/12/2023 at 15:00  -Sunday to finish the coursework off. | Hugo Hewitt,  King Lok Lam,  Yifeng Wang,  Daji Liang,  Usama Ahmed,  Priyanka Naithani |
| 07/12/2023  Online meeting at 15:00 | -Questions about the delegation of the task. And assigning the experiments:  -Priyanka, Daji and Usama -> Experimentation on the algorithm, finding a local heuristic algorithm  -Usama finished Abstract and Introduction and TTP description.  -Lam brought up that for the TSP part of the algorithm, on the largest dataset creating a distance matrix was computationally impossible. Suggested a heuristic algorithm to use instead; 3-opt.  -Hugo showed the code for the KNP part of the system, even works on the largest dataset due to the different computational complexity to TSP.  -Discussion to make sure all were doing different algorithms.  Next meeting decided when and what time to meet on Sunday, 13:00 by the library. | Hugo Hewitt,  King Lok Lam,  Yifeng Wang,  Daji Liang,  Usama Ahmed,  Priyanka Naithani |
| 10/12/2023  In person meeting in a study room  From 13:00 | -Group work to continue progress on the project.  -Time complexity of the big dataset discussed, takes too long to run with the code. -> Lucas  -Discussion of group and individual report submission contents and format.  -Discussion of the marking criteria and specification.  -Working more on the nsga and 3-opt algorithm (Hugo, Lam)  -Collaborating research on the overleaf document (Daji, Priyanka, Yifeng)  -Writing problem task breakdown (Hugo) | Hugo Hewitt,  King Lok Lam,  Yifeng Wang,  Daji Liang,  Usama Ahmed,  Priyanka Naithani |

**Signed:**

*Hugo Hewitt,*

*Usama Sajjad Ahmed,*

*Priyanka Naithani,*

*Daji Liang,*

*Yifeng Wang,*

*King Lok Lam*