

# FYP Strategy Plan / Timeline

Tan Jing Han - NTU CCDS Y4

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## Research

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| **September** | | |
| **Tasks** | **Dates** | **Comments** |
| 1. Research existing apps  * Wunderground maps * Literature survey | Week 4  Sep 1 - 7 |  |
| 1. Submit strategy plan | Sep 2 |  |
| 1. Draft out functional and non-functional requirements | Week 5  Sep 8 - 14 |  |
| 1. Research and plan tech stack/APIs/visualization libraries  * Libraries: Leaflet.js, Mapbox GL.js, D3.js * API: Google Maps API * Which database to use: SQL, NoSQL * Which frontend/backend frameworkr are best: MERN | Week 5  Sep 8 - 14 |  |
| 1. Research weather prediction approach  * Data Science Solutions: Time Series Analysis Techniques * AI/ML solutions: Regression, Decision Trees | Week 6  Sep 15 - 21 |  |
| 1. Figma for user study  * Come up with multiple designs | Week 7  Sep 22 - 28 |  |
| 1. Send a UIUX design survey/user study 2. Collect responses and finalize UI | Recess Week  Sep 29 – Oct 5 |  |

## Implementation & Testing

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| **October** | | |
| **Tasks** | **Dates** |  |
| 1. Plan, design backend architecture 2. Develop backend architecture 3. Fetch, process weather data from APIs 4. Implement APIs for processed weather data  * RESTful/GraphQL  1. Conduct unit testing, integration testing, and user acceptance testing 2. Debug and resolve any implementation issues | Week 8 – 9  Oct 20 - 31 |  |
| 1. Design frontend architecture 2. Implement frontend template 3. Implement interactive maps 4. Conduct unit testing, integration testing, and user acceptance testing 5. Debug and resolve any implementation issues | Week 10 – 11  Oct 20 - 31 |  |

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| **November** | | |
| **Tasks** | **Dates** | **Comments** |
| 1. Integrate frontend with backend APIs to display real-time weather data and predictions | Week 12  Nov 3 - 9 |  |
| 1. Implement animations for weather pattern changes (e.g., rainfall movement, temperature gradients) 2. Optimize animations for smooth rendering and interactivity. 3. Add user controls for selecting specific areas, time ranges, and weather attributes. | Week 13 – 14  Nov 10 - 23 |  |
| 1. Start data exploration, cleaning processing for Weather Prediction feature 2. Develop and train initial machine learning models / Data analysis techniques (time series prediction) | Week 14  Nov 24 – 30 |  |
| 1. Develop UI for weather prediction 2. Write UI tests | Week 15  Nov 30 – Dec 7 |  |

## Important Dates

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| Module | Date | Task | Comments |
| HW0288 Engineering Communication | 13 Sep (Fri, S1Wk5) | Group Assignment |  |
| 27 Sep (Fri, S1Wk7) | Assignment 1 |  |
| 8/15 Nov (Fri, S1Wk12/13) | Assignment 2/3 |  |
| SC2079 MDP | 27 Sep (Fri, S1Wk7) | Android Quiz |  |
| 27 Sep (Fri, S1Wk7) | System functionality (checklist) |  |
| 25 Oct (Sat, S1Wk9) | Task Assessments |  |
| 19 Oct (Sat, S1Wk10) | Video presentation |  |
| SC3010 Computer Security | S1Wk7 | Quiz 1 |  |
| S1Wk13 | Quiz 2 |  |
| S1Wk14 | Case studies Presentation |  |
| SC4016 Cyber Threat Intelligence | 26 Aug (Mon, S1Wk3) | Quiz 1 |  |
| 7 Oct (Mon, S1Wk8) | Quiz 2 |  |
| 14 Oct (Mon, S1Wk9) | Submit Group Project |  |
| S1Wk10/11/12) | Presentation |  |
| 11 Nov (Mon, S1Wk13) | Quiz 3 |  |
| ES5003 Blue Planet | S1Wk7 | Mid-term exam 1 |  |
| S1Wk13 | Mid-term exam 2 |  |
|  | Project Video Submission |  |
| FYP | 2 Sep 2024 (Mon, S1Wk4) | Submission of Project Plan/Strategy to Supervisor | Students are required to consult their supervisors on the workout of their Final Year Projects and submit their project plans/strategies to their supervisors. |
| 27 Jan 2025 (Mon, S2Wk 3) | Submission of Interim Report | Students are required to submit interim reports to NTULearn and their Final Year Project supervisors to state the progress of their projects. |
| 24 Mar 2025 (Mon, S2Wk 10) | Submission of Final Report | Students are required to submit a softcopy/hardcopy of the FYP Final Reports (if hardcopy, Ring binding) to NTULearn, their supervisors and extend a copy to their examiners for grading. Students are to approach their supervisors and examiners in 1-2 weeks time for any modifications to be made to their Final Reports. Assessment of report should be based on this version and not on the amended final report. |
| 18 Apr 2025 (Fri, S2Wk 13) | Submission of Amended Final Report | Students are required to submit amended FYP final reports to their supervisors and extend a copy to their examiners. This is the final submission and it is the duty of the supervisors to ensure that amendments have been carried out accordingly. No more further modifications to their FYP reports are allowed after this submission. Remember to submit one electronic copy to NTU library DR-NTU: <https://dr.ntu.edu.sg/> following the steps at <https://libguides.ntu.edu.sg/c.php?g=926884&p=6695137> |
| 9, 12-14 May 2025 (Fri, Mon-Wed S2-End Exam) | Oral Presentation | Each student is allocated a half-hour time slot for oral presentation (20 min.) and Questions/Answers time (10 min.). Remember to submit one electronic copy to NTU library DR-NTU: <https://dr.ntu.edu.sg/> following the steps at  <https://libguides.ntu.edu.sg/c.php?g=926884&p=6695137> if you have updated your report. |