Group

MidTerm Project

Light House Labs Jan 2021

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# Executive Summary

This is the project management document for the Light House Labs Midterm Project for Jan 2021, Group. This document serves as a guide for how the project will be executed.

# Objectives & Success Criteria

|  |  |
| --- | --- |
| Objectives | Success Criteria |
| Data processing |  |
| Modelling |  |
| Results |  |
| Presentation | All team members feel represented and have a chance to contribute |
| Github Repository | All team members have access, content is clean and concise with comments/markdown giving context |
| Complete project | All team members feel represented and have a chance to contribute |
|  |  |
|  |  |

# Assumptions, Constraints/Dependencies, Requirements

|  |
| --- |
| Assumptions |
| Feature engineering will be 80% of project time |
| Mentor help available to get through stuck points |
|  |

|  |
| --- |
| Constraints/Dependencies |
| Team members availability for group work |
|  |
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| --- |
| Requirements |
| Data, computer hardware |
|  |
|  |

# High-Level Risks

|  |  |  |
| --- | --- | --- |
| Risk | Level | Mitigation |
| Communication breakdown | High | Daily meetings  Project Plan  Change management section  Discord table  Slack group |
| Project documentation incomplete | High | Remain vigilant in good behaviour from the start  Spend time each day to work on keeping it clean/clear  Put deadline 1 week after Project Close to complete final |
|  |  |  |
|  |  |  |

# Communication

## Daily Communication

* Discord chat table
* Slack group chat

## Project Meetings

### Daily Meeting

A daily meeting should occur to touch base with all team members and discuss:

1. Progress/Status
2. Risks/Challenges
3. Next work/Timeline updates

This will serve as a predictable opportunity to discuss the project at a high level and connect additional help when risks are identified.

**Proposed time: Daily 10:00 - 10:30am PST**

### Milestone Meetings

Ahead of major milestones (Presentation, Report, Final Code/Git upload) a meeting may be required to align the team on the deliverable.

**Proposed: Add additional time to daily meeting 10:30am – 12:00pm PST (if necessary)**

# Change Management

When the need to change an agreed upon component of the project arises, notification of the team with rationalization and written record of the change should occur. **Recommendation is to do this by email.**

# Deliverables

* Project Plan
* Timeline
* Work Packages/WBS
* Presentation
* Report

## Work Breakdown Structure

|  |  |  |
| --- | --- | --- |
| Tasks | Est Completion Date | Notes, Dependencies |
| Data Exploration | Sun Feb 7 | What do we have? |
| Data Cleaning | Sun Feb 7 | Remove nulls, empty columns, encode |
| Baseline Model (MVP) | Mon Feb 8 | Obtain baseline accuracy/R2 |
| Iterate models | Tues Feb 9 | Obtain model with highest accuracy   * linear / logistic / multinomial logistic regression * Naive Bayes * Random Forest * SVM * XGBoost * The ensemble of your own choice |
| Select best model, tune | Wed Feb 10 | Model with highest accuracy from iteration should be tuned to find accuracy > 95% |
| Run test data, evaluate outcome | Thur Feb 11 | Using 2020 data, run the model to make the predictions |
| Make business observations | Thur Feb 11 | How does this model help the business? |
| Create presentation | Fri Feb 12 | As per the guidelines |
| Submit file | Fri Feb 12 | As per the guidelines |

# Quality

How will we decide what good looks like?

* Accuracy >95% (Anurag, 2021)

How will we know when we are complete?

* When we get a model that can predict with 95% accuracy, we will run our 2020 data
* We will use the output of this to predict delays and make business decisions

# Summary Milestones

|  |  |  |
| --- | --- | --- |
| Date | Item | Notes |
| Fri Feb 5 | Project Kick Off Meeting |  |
| Sun Feb 7 | Data Cleaning/Exploration completed |  |
| Mon Feb 8 | MVP created | Initial accuracy/R2 recorded |
| Thur Feb 11 | Finalize model  Run 2020 test data  Finish Presentation |  |
| Fri Feb 12 | Project Presentation  Submit final file  Project Close |  |

# Schedule

|  |  |  |
| --- | --- | --- |
| Date | Item | Notes |
| Fri Feb 5 | Project Kick Off Meeting  Identify problem statement  Start to identify Project work packages |  |
| Sat Feb 6 | Project Meeting |  |
| Sun Feb 7 | Project Meeting |  |
| Mon Feb 8 | Project Meeting |  |
| Tues Feb 9 | Project Meeting |  |
| Wed Feb 10 | Project Meeting |  |
| Thur Feb 11 | Project Meeting  Finish Project Presentation |  |
| Fri Feb 12 | Project Meeting  Project Presentation  Project Close |  |

# Stakeholders

|  |  |  |
| --- | --- | --- |
| Name | Position | How are they utilized |
| Anurag | Mentor | Advice on project execution, model evaluation, output/presentation |
| Eric | Mentor | Advice on model evaluation, output/results |
| Light House Labs | School | Provide assessment of project |
|  |  |  |
|  |  |  |

# Project Team

|  |  |  |
| --- | --- | --- |
| Name | Phone Number | Email |
| Stacey McLennan-Waldal |  |  |
| Devika Sunil |  |  |
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