

Project VEHICLE IMAGING AI

PROJECT CHARTER

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**Amendment History**

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| --- | --- | --- | --- |
| **Section** | **Page** | **Version** | **Comment** |
| 4 | 1 | 1.1 | Elaborated more on why scrum master was appointed |
| 6 | 1 | 1.1 | Explained more on project methodology |
| 8 | 1 | 1.1 | Included more information on scope of the project |

Add a row for each section update or consolidate if changes are minimal. NOTE: Changes should be tracked within the document if the document is to be re-distributed, so that the audience can quickly see the changes.

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Preface

The purpose of this document is to outline the Charter for Vehicle Imaging AI. It serves as an agreement between the project team, the sponsor and the supervisor. It outlines the project’s purpose and how the project will be approached, resourced, managed and delivered. Any amendments after this document has been signed off will be via addenda.

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# Project Summary

Project description

# This is a registration plate masking project

1. Phase 1 - Involves building a model to identify the registered plate and conceal it with company logo (autoflip)
2. Phase 2 – Involves validating the information given by the user (seller) is correct or not.

Reasons why sponsor offered this project,

1. Majorly for cutting down the manual hours/effort spent to confirm if the algorithm works correctly. The operations team looks into each image for confirming if the masking was correct which is a lot of work to do.
2. To improve efficiency of the presently used model which is 60% accurate and explore new algorithms which works well under edge cases with 100% accuracy.
3. To avoid fraudulent sellers with forged number plates to go ahead with selling, validating could help in secure and risk-free transaction.

Main objectives to be met by the team members are,

1. Top priority to be given to plate masking with very high accuracy considering all edge cases.
2. After successful phase 1 completion, validating the information given by seller.
3. If the plate is already masked by another car sales logo, then the rego must still be retrieved
4. Next priority item would be to remove car sales logo that could have been reused and find the rego based on VIN (Vehicle Identifier Number)

# Project Sponsor/Product owners

1. The project sponsors are Julian Fogarty and Matt Glenister of Idom innovations.
2. IDOM Innovations is a division of IDOM Inc., the biggest used automobile dealer in Japan. The business has been offering technological solutions for the automotive sector, with a primary focus on delivering technologies and solutions to maximise value for the clients and improve their automobile experiences. IDOM started to consider the need for new technology to serve an environment that was rapidly changing not long after becoming a significant participant in the Australian automotive market

# Stakeholders and End Users

The key Idom innovation stakeholders are,

1. Matt Glenister (Senior product manager, Idom Innovations) – Project consultant
2. Julian Fogarty (CPO, Idom Innovations) – Project aid
3. Erin Lumsden (Software developer Intern, Idom Innovations) – Worked on developing previous GoogleVision model and communicates with team members regarding dataset and technical clarifications.

Course coordinator/Supervisor/Mentor - Golnoush Abaei – Guides team members with any suggestions on improving the product. Supports when facing any difficulty with project management.

# Appointment of Scrum Master

The project leader is Kanimozhi Udayakumar. The project leader was appointed since she worked in similar domain in computer vision and image processing and got prior experience. Also she has worked in scrum/agile previously for RMIT project and has prior knowledge with project management tools. Some of the other reasons to select scrum master is,

a. She is self-managed, takes ownership and accountability.

b. She is aligned, collaborative and organises meetings

c. Focused on goals and objectives.

d. Flexible and neutral.

# Project Team Members

1. Kanimozhi udayakumar – Scrum master, developer, tester
2. Prateek Kumar Singh – Developer, tester

# Project Methodology and Approach

Approach that team will take to deliver the project,

1. Initial phase would be requirement phase which includes product backlog to prioritize items, to set up the working environment and version control.
2. Research phase to explore algorithms that would give best accuracy.
3. Development phase after the algorithm is finalized.
4. Testing phase to compute the accuracy numbers on testing data including all edge cases
5. Deployment phase to release the final product.

Team’s location would mostly be online or with teammates at RMIT. Team would be following scrum methodology for project management.. Reason to choose scrum are as follows,

1. It is an incremental development process and there is scope to develop based on previous sprints
2. Clear division of roles and responsibilities makes it easier to divide and complete work.
3. Flexible if there are changes from client which can be adopted from next iteration
4. Meetings are often conducted in scrum which makes it easy for everyday updates and work together as a team.
5. Since there are regular meetings, there would be quick response to any changes and risk can be reduced.
6. Collaboration with client directly.

We will be using Trello board for project management and Git for version control.

Git is considered for version control because,

a. It helps in comparing changes in code that each team member made over a period of time

b. Any code revert or recall is possible.

c. Easy to find which team member made a change in code to fix the issue faster.

d. Git branches makes it easier for team members to work on different branch and finally merge it to main.

Trello board is considered for project management as,

a. Task responsibilities and ownership can be assigned to team members for each product backlog

b. For each product backlog there are checklists that can be created which is useful to calculate the remaining work left to complete the PBI.

c. Priority and story points can be assigned to each product backlog item

d. It is visually very clear with various colour codes for easy differentiation.

# Project Governance

The Governance model is as follows:

**Reporting and meetings**

1. Having regular weekly meetings with client and supervisor.
2. Any issues or hurdles in the process, we will seek guidance from client and supervisor through email.
3. We have meeting with the supervisor on Thursday 12.30 PM – 1.00 PM
4. We have meeting with the client on Wednesday 1.30 PM – 2.00 PM
5. We will be communicating it beforehand if we are going beyond the agreed-upon scope.
6. We will be sending across the agenda for meeting before the start of the meeting.
7. We will be managing meeting minutes after every meeting within team, with client and with supervisor.
8. We will be managing a timesheet with all entries about the time spent in project.

**Responsibilities**

a. Kanimozhi Udayakumar will be responsible to take the role of scrum master, developer and tester. She will be responsible to organize meetings, send meeting agenda and meeting minutes. She will be responsible for researching, developing and testing the product.

b. Prateek Kumar Singh will be responsible to take the role of developer and tester. He will be responsible for researching, developing and testing the product.

c. We will be managing a sprint planning document to plan the scope of next sprint.

d. We will be managing a sprint review and retro document to review our finding from previous sprints and what we will improve on.

**Change control and risk management**

a. We will be managing a list of risks that could occur, probability that it could occur and what will be the impact of that on the product.

b. We will be listing down some strategies that we will follow to manage the risks.

c. Based on the risk level(low, medium or high) we will decide on whether the risk can be ignored or immediate steps to be taken to overcome the risk.

d. Throughout the project, risk will be considered during sprint planning and sizing product backlog.

e. Product backlog will be designed having change control in mind. Each story will be categorized into must have, could have and low priority.

# Project Scope & Deliverables

Project scope

This registration plate masking project entails creating a model to recognise the registered plate before hiding it with the autoflip firm logo. Following the successful masking of the licence plate, the model must determine whether the information provided by the user is accurate or not.

The goal of this project is to increase the effectiveness of the model now in use, which produces accurate answers 60% of the time, by investigating new algorithms that would perform well in edge circumstances and produce 100% accuracy. Also, verifying could contribute to a safe and risk-free transaction by preventing dishonest sellers using fake number plates from proceeding with the sale.

**Priorities:**

1. Plate masking should be prioritised with the utmost accuracy while taking into account all potential edge circumstances.
2. At successful completion of phase 1, verifying the information provided by the seller.
3. Even if another automobile sales branding has already obscured the licence plate, it must still be retrieved.

Deliverables

1. PHASE1: More efficient model than present which includes more than 85% accurate results and can successfully mask the number plate.
2. PHASE2: Retrieval of Seller information based on the rego number retrieved via the Vehicle Number Plate to validate the authenticity of the seller.