<Project Name>

<Company name>

<Students names>

**Product Requirements Document**

Revision History

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| --- | --- | --- | --- |
| Version | Description of Change | Author | Date |
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Approval

List relevant people from the company that need to approve the requirements.

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| --- | --- | --- |
| Department/Mentor | Name & Email | Date |
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# Purpose & Scope

*Define the general purpose of the project. This phrase should be short and serve as an introduction to the rest of the document by setting the context. In case visual element (charts/flow charts/sequence diagrams) might assist in presenting the problem feel free to add sub-section and detail them.*

# Motivation

*List what problems your project is solving and what are the benefits it will bring to the company, end users or any other relevant elements.*

*This section should explain in a clear language what is the business justification for what you are doing.*

Motivation A

Detailed explanation.

Motivation B

Detailed explanation.

# Assumptions, Global Design Constraints and External Dependencies

## Critical Success Factors

*Define what are measurable factors for the success of your project.*

*Examples:*

* *The neural network will detect something with 90% success ratio.*
* *Improvement of 50% in some business case.*

*Important:*

1. *All success factors you define must be measurable – either by a threshold or binary.*
2. *In some cases, it might be easier to define the requirements (section 5) and then re-visit this section.*

## Design and Implementation Constraints

### External Standards

*Detail any external standard you must comply with.*

*External standard can be also company protocol procedures, technical limitations etc.*

*Examples:*

1. *Development language should be Java.*
2. *The production environment for the project should be AWS.*
3. *The development framework must be TensorFlow.*
4. *Must work with existing API provided by the company's backend service.*

### Regulatory Standards

*Detail any regulatory standards you must comply with. Pay special attention for privacy issues with data.*

### Localization/Internationalization Standards

*Detail in case your app needs to support localization for a specific country.*

### Backwards Compatibility

*Detail compatibility requirements for any application/SDK already developed within the company. Pay special attention to how the company plans to integrate your project if that is the case.*

## Additional Assumptions and Dependencies

*Free text detailing any other dependencies that are not covered by previous sections.*

# Related Documents

*Refer to external documents of the company, relevant research they provided etc.*

# Product Features/Functionalities

*Detail a list of functionalities you are required to implement in your project.*

*The requirement shall be described as functional and not relate to the technical implementation.*

*Example: Monitoring the location of the user every 5 seconds.*

*Be detailed and clear as much as possible,* ***good product description leads to easy and precise development.***

## Requirement A

Detailed description.

## Requirement B

Detailed description.

# Security requirement

Detail any security requirements/standards you must implement.

Example: encryption of data at rest, VPN connectivity to the development network etc.

# Management/Integration

Detail (if relevant) how the company is supposed to manage the application/project (e.g., admin dashboards). You can also refer to this section as a requirement in section 5. I have left some possible sections as an example.

For those developing ML/DL model – need to understand thoroughly how and where you model will be provisioned and if there are any requirements to get some real time performance metrics.

## Logs/Performance Events & Alerts

Are you connecting to any existing logging/performance monitoring system?

How the app is being monitored?

How can you/should you benchmark your solution performance comparing to what exists today?

## Admin Dashboards

Is there supposed to be any admin dashboard or something that allows to company to configure your app.

## Role based access control (RBAC)/User management

Who are the users?

How are they supposed to log-in? Where are their details and credentials are managed?

## Integrations with external systems

Example: AWS CloudWatch.

# Scalability & Performance

Detail any scale/performance requirement.

The app should be able to handle workload of X users.

The action the app is performing should not take more than X seconds.

Under certain load the action should take less than Y seconds.

The input to the app will up to 10k records.

# Data

This is a critical section for those developing ML/DL model or any project that relates on the company's data.

You must detail in thorough:

* What is the data?
* Where is it coming from?
* Add examples of the data (anonymize if needed but the format should be clear)
* Relate to the size of the data available to you.
* Do you need to synthesize some data?
* If there are possible issues dealing with large volumes of data, please state them.

# User Documentation/Project delivery

Details any required documentation you will deliver with the project.

You need to understand who will use your project/code and how.

Ideas:

Deliver a Jupiter notebook with documentation.

Share the project in Github with proper documentation.

Also deliver a doc site with the project.

It is recommended to consult with the mentors and understand what will make future usage easier.

## User Manuals

Refer of you need to create any specific user manual/specs by the company's standard.

## Knowledge/Skillset gaps

Map any technical content that you need to go over before moving to the technical design. Such content could be development language, understanding technical issue in the project you are contributing for etc.

This section is important as those activities might be done before/in parallel to working on the project requirements or be the first activities in the sprints of implementing the technical design.