
Software Requirements Specification

For
**Developing a Student Profile with the help of
machine learning**

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1. Introduction

1.1 Purpose

The purpose of this document is to build an system for developing student profile i.e. if someone needs overall data about a student the proposed system will do the same.

1.2 Intended Audience and Reading Suggestions

This document is intended for project guide and experts. This project is useful for doctors. Section 1.4 briefs about the scope of project, section 2 walks you through overall description of product like functions, operational environment, design and implementation constraints, etc.

Interface requirements is described in section 3. System features are listed in section 4 and section 5 lists non functional requirements.

1.3 Product Scope

- Our goal is to generate student profile by analyzing student data which will assist teachers. The required accuracy and timing of this system which is of significant importance to both the cost and time effective

1.4 References

- <https://machinelearningmastery.com/why-one-hot-encode-data-in-machine-learning/>
- <https://machinelearningmastery.com/check-point-deep-learning-models-keras/>
- <https://dzone.com/articles/8-best-deep-learning-frameworks>

2. Requirement Analysis

- The product is designed for improving the process of learning. It would serve as a

companion for teachers to speed up the evaluation process without any compromise on the precision.

- This would be a completely new, self-contained product. This documents explains the complete system and its required components. A simple component diagram is shown below. The description of each component is given in section 3.

3. Functional Requirements

4. External Interface Requirements

4.1 User Interfaces

The user interface for the software shall be compatible to any operating system Such as Windows, Ubuntu etc. by which user can access to the system. The user interface Shall be implemented using any tool or software package like JavaScript, node.js, etc.

4.2 Hardware Interfaces

NO EXTERNAL HARDWARE NEEDED

4.3 Communications Protocols

TBD

4.4 Database Backend

The Database intended to be used is MongoDB.

5. Technical Specification

6. 5.1 Performance constraints

- Fancy number plates can cause number plate detection problems.
- Network connectivity can hamper the parking allocation messages to be received by the vehicle owner.
- Multiple vehicle entries can cause problem in image processing of number plates at a time.

7. 5.2 Memory/OS/Hardware

Hardware requirements:

- Intel i3 processor or its equivalent
- 8 GB physical memory

Software requirements:

- Windows 10/ Linux

Appendix A: Glossary