# Software Requirements Specification for Student Placement and Graduation Prediction System

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## 1 Introduction

This document describes the software requirements specification (SRS) for a student placement and graduation prediction system. The system will use machine learning to predict whether a student will secure a placement and when they will graduate. The system will be used to help students to make the most of their available resources and achieve their academic and career goals.

## 2 System Overview

The student placement and graduation prediction system is a web application that uses machine learning to predict student placement and graduation year. The system will be used by students to make informed decisions about their academic and career paths. The system will also be used by educators and advisors to provide guidance and support to students.

## 3 Functional Requirements

The system must be able to:

* Predict student placement with a high degree of accuracy. * Predict student graduation year with a high degree of accuracy. * Generate predictions for individual students and for groups of students. * Allow users to filter and sort predictions by various criteria. * Provide users with explanations for predictions.

## 4 Non-Functional Requirements

The system must be:

* Easy to use and accessible to all students. * Secure and protect student data. * Scalable to handle a large number of users and predictions.

## 5 Use Cases

The following are some of the use cases for the student placement and graduation prediction system:

* A student can use the system to predict their chances of securing a placement in a particular company or field. * A student can use the system to plan their academic coursework and extracurricular activities in order to maximize their chances of graduating on time and securing a desired placement. * An educator can use the system to identify students who are at risk of not graduating on time or not securing a placement. * An advisor can use the system to provide guidance and support to students based on their predicted placement and graduation year.

## 6 System Architecture

The system will be implemented as a web application using the following technologies:

* Python * Django * TensorFlow

The system will use a machine learning model to make predictions. The model will be trained on a dataset of student data, including academic records, course progress, extracurricular activities, and previous placement results.

## 7 System Testing

The system will be tested using the following methods:

* Unit testing * Integration testing * System testing * User acceptance testing

## 8 System Deployment

The system will be deployed to a cloud-based hosting platform. The application will be accessible to students through a web browser.

## 9 Conclusion

This SRS document has described the requirements, architecture, implementation, testing, and deployment of a student placement and graduation prediction system. The system will use machine learning to predict whether a student will secure a placement and when they will graduate. The system will be used to help students to make the most of their available resources and achieve their academic and career goals.