

Course Prerequisite Analysis and Skill Recommendation System

# Course Prerequisite Analysis and Skill Recommendation System

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#### Outline

Course Prerequisite Analysis and Skill Recommendation System

#### Outline

Introduction

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Statemen

Literature Survey

System Architecture

Sequence

Use Case Diagram

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- 1 Introduction
- 2 Problem Statement
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#### Introduction

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 Course Prerequisite Analysis and Skill Recommendation

**■** Empowering Your Educational Journey



#### Problem Statement

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Lack of Clear Learning Goals

- Uncertainty About Prerequisites
- Repeating What's Already Known
- Losing Motivation
- Lengthy Learning Times



# Literature Survey

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#### Ineffective School Assessments

- Course and Job Recommendation Systems
  - Paper 1: Job and Course Recommendation System
    - Authors: Derick Prince B, Madhan K, Vishwa K, Yamunathangam D
    - Published in ICAECA 2023
  - Paper 2: Personalizing Student Graduation Paths
    - Authors: Nicolas Dobbins, Ali R. Hurson, Sahra Sedigh Sarvestani
    - Published in COMPSAC 2023



### System Architecture

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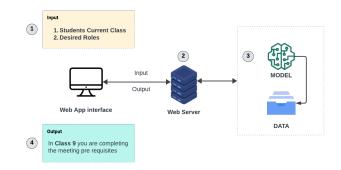


Figure: System Architecture Overview



#### Sequence Diagram

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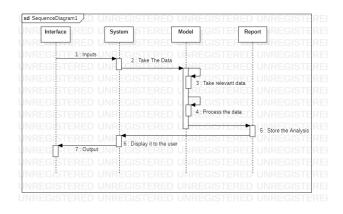


Figure: Sequence Diagram





### Use Case Diagram

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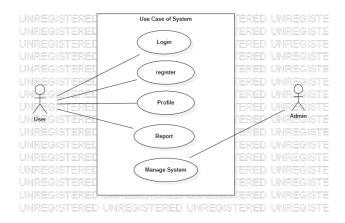


Figure: Use Case Diagram





# Methodology

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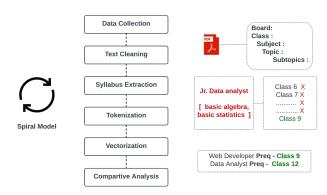


Figure: Background Process Overview





### Implementation - Figure 1

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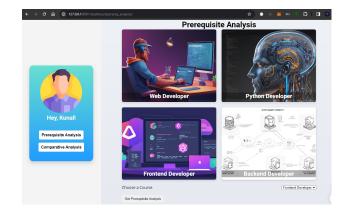
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### Implementation - Figure 2

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# Software and Hardware Requirements

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**Software Requirements:** 

OS: Windows 10 Pro or Later

■ Programming language: Python 3.10 or Later

■ Development Tools: PyCharm

■ Libraries: NLTK, PyTorch, Transformers

Hardware Requirements:

CPU: Dual-core processor (Intel Core i3 or equivalent)

RAM: 8GB or more

■ Storage: Minimum 256 GB HDD/SSD

Network: Ethernet or Wi-Fi connectivity

Graphics Card: Integrated Graphic Card is enough



#### Conclusion

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In Summary, Our Proposed System Will Work As a Course Prerequisite Analyzer Tool For Students pursuing their Primary and Secondary Education. As We Go In-Depth, The System's Knowledge Base and Accuracy In Generating Responses Will Be Increased.



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Thank You...