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Literature Survey
System Architecture
Sequence Diagram
Use Case Diagram
Methodology
Implementation

Course Prerequisite Analysis and Skill Recommendation System

Kunal G. Patil
Bhavesh T. Devare
Pranav S. Patil
Himanshu V. Patil
Under the Guidance of
Dr. Manoj E. Patil

SSBT's College of Engineering & Technology,
Bambhori, Jalgaon - 425 001, Maharashtra, India

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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

Course Prerequisite Analysis and Skill Recommendation System

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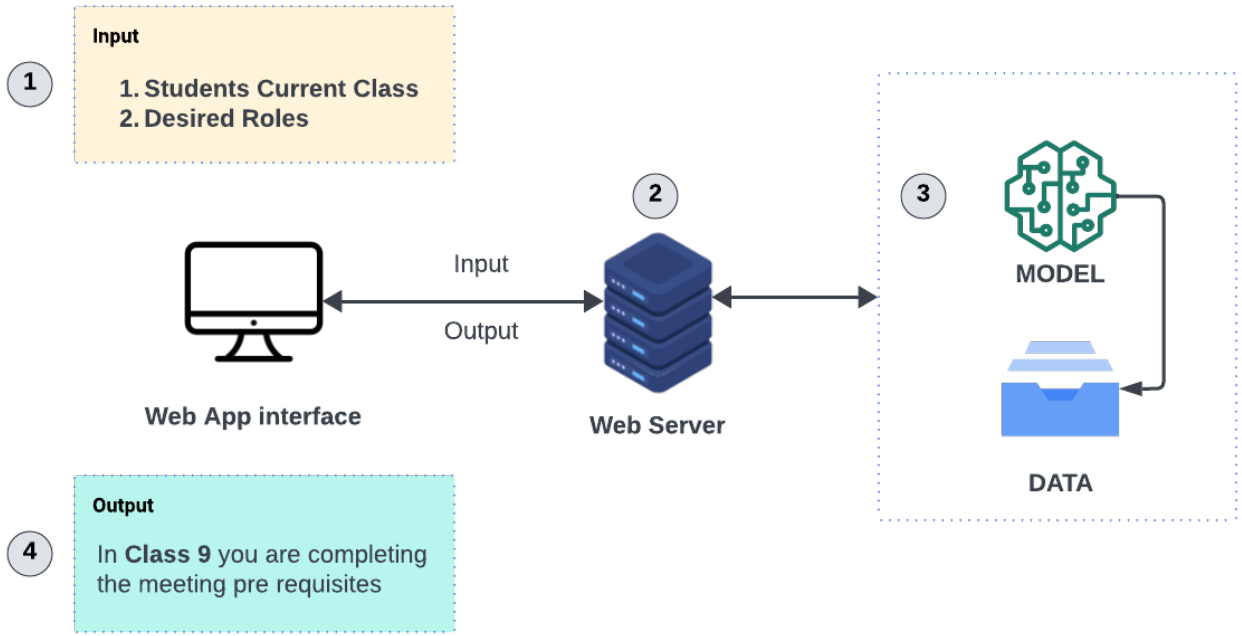

Figure: System Architecture Overview

Sequence Diagram

Course Prerequisite Analysis and Skill Recommendation System

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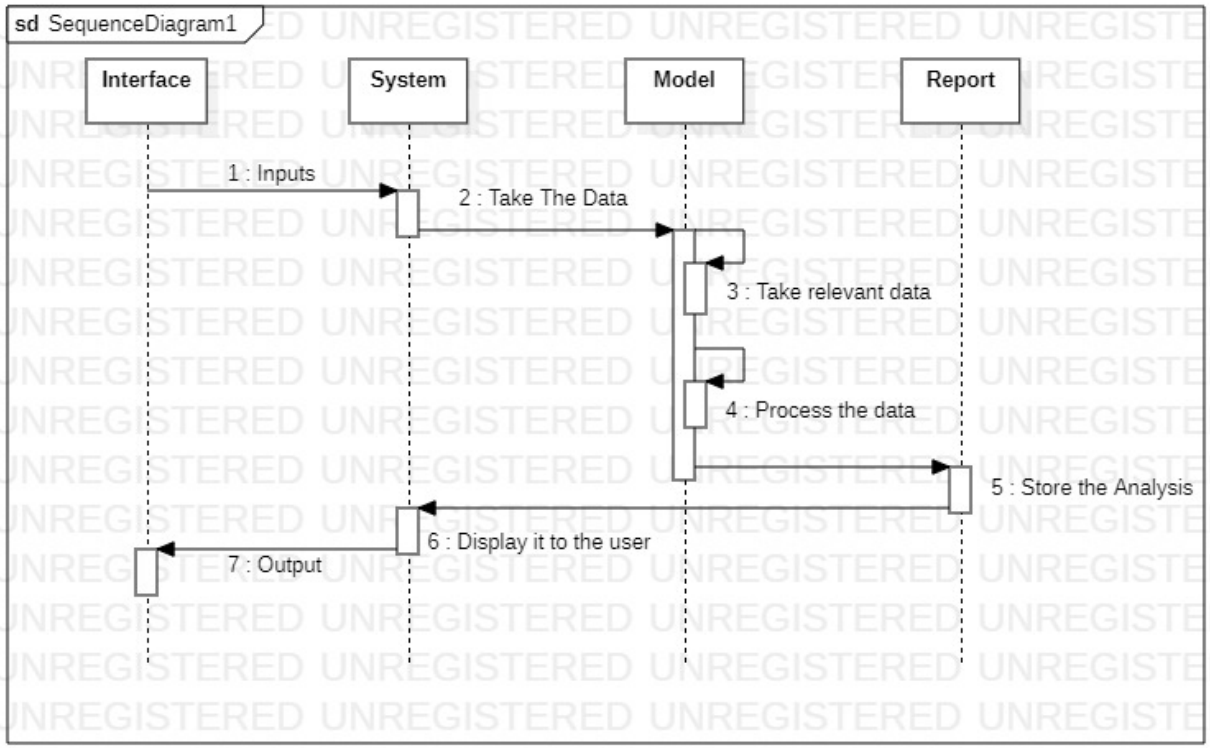

Figure: Sequence Diagram

Use Case Diagram

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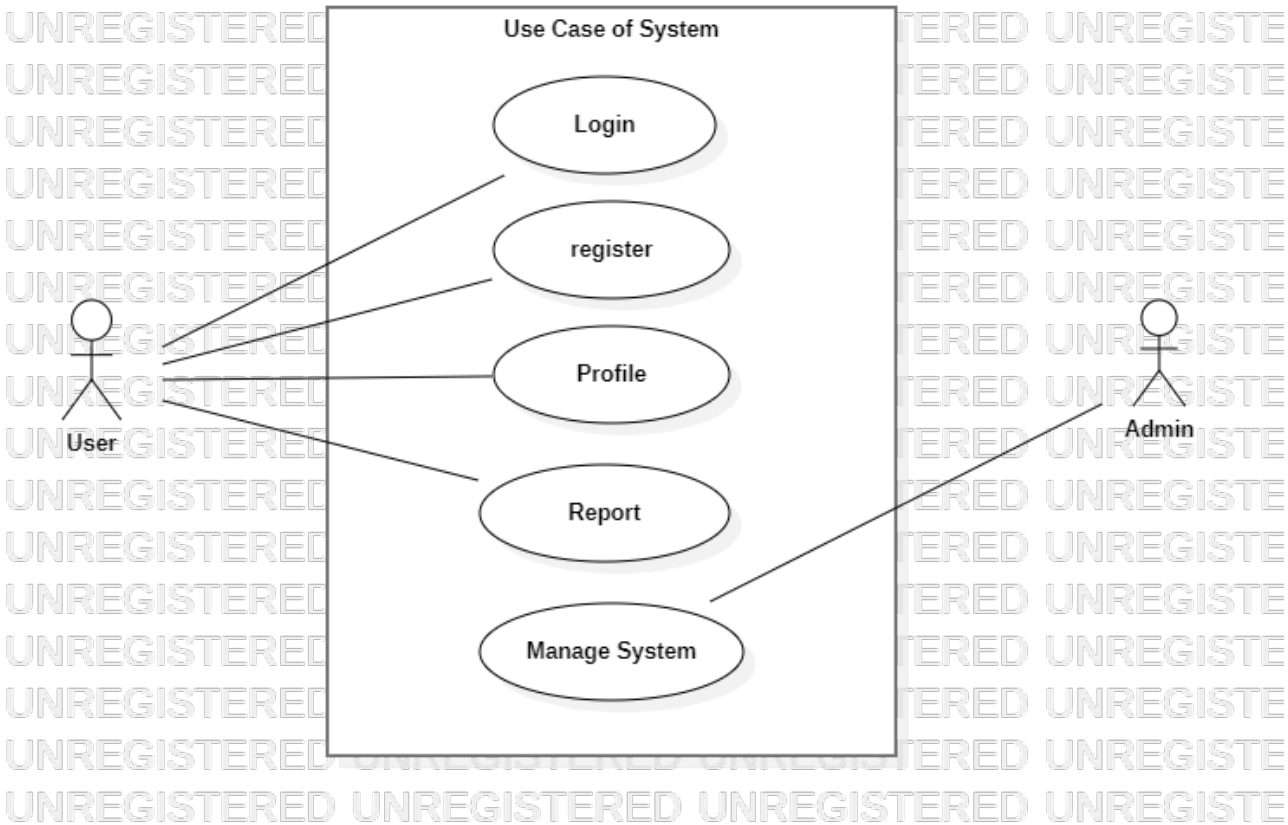

Figure: Use Case Diagram

Methodology

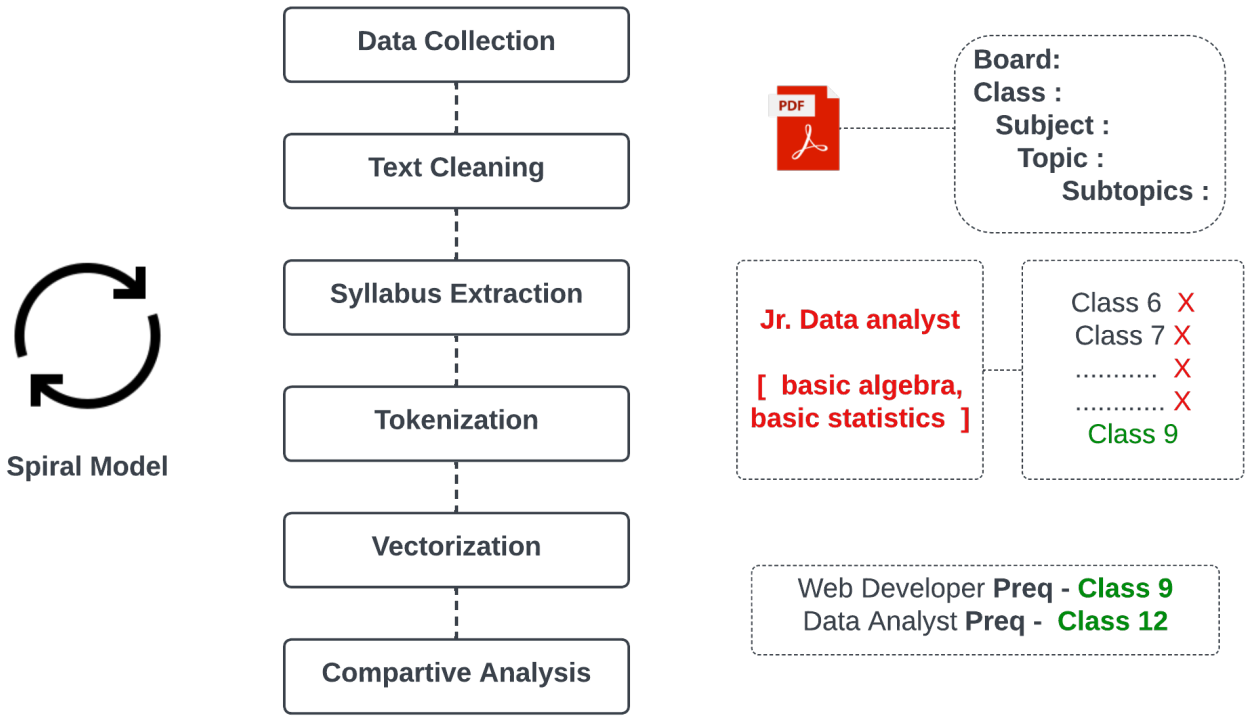

Figure: Background Process Overview

Implementation - Figure 1

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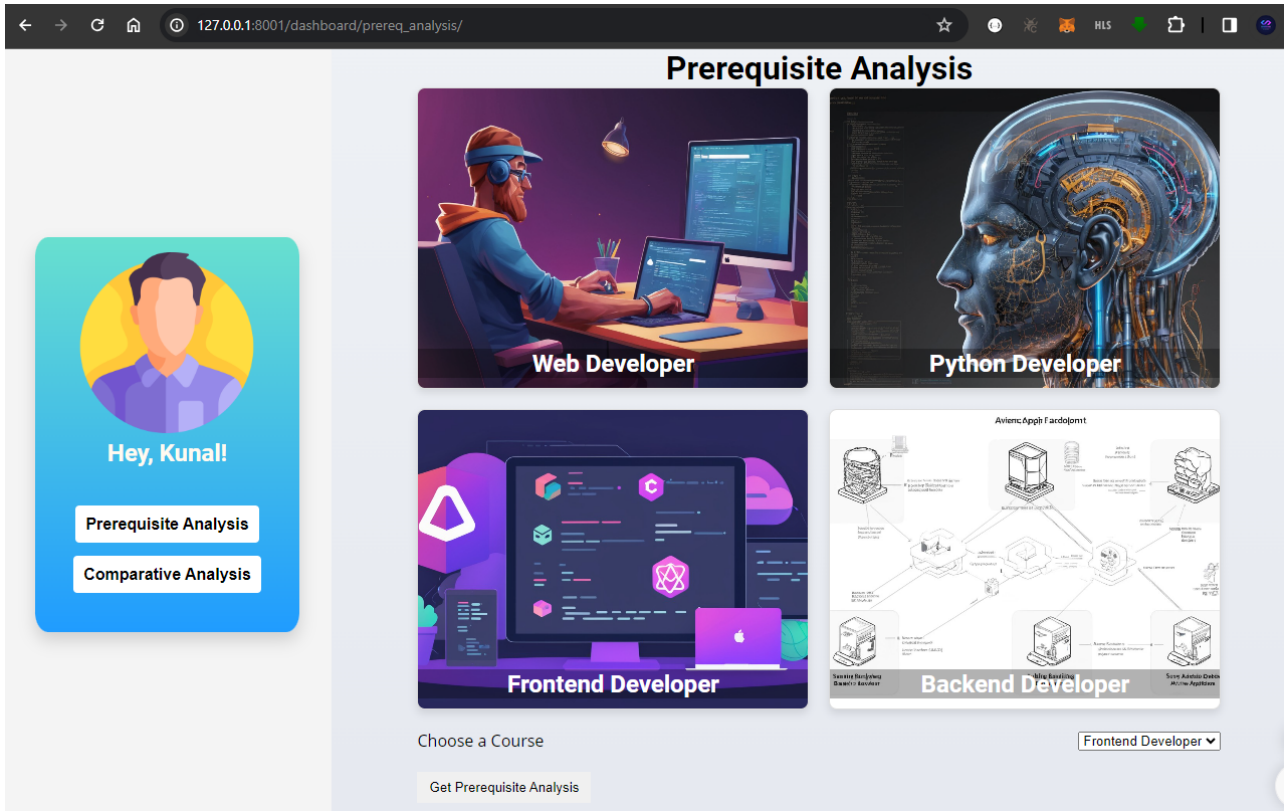
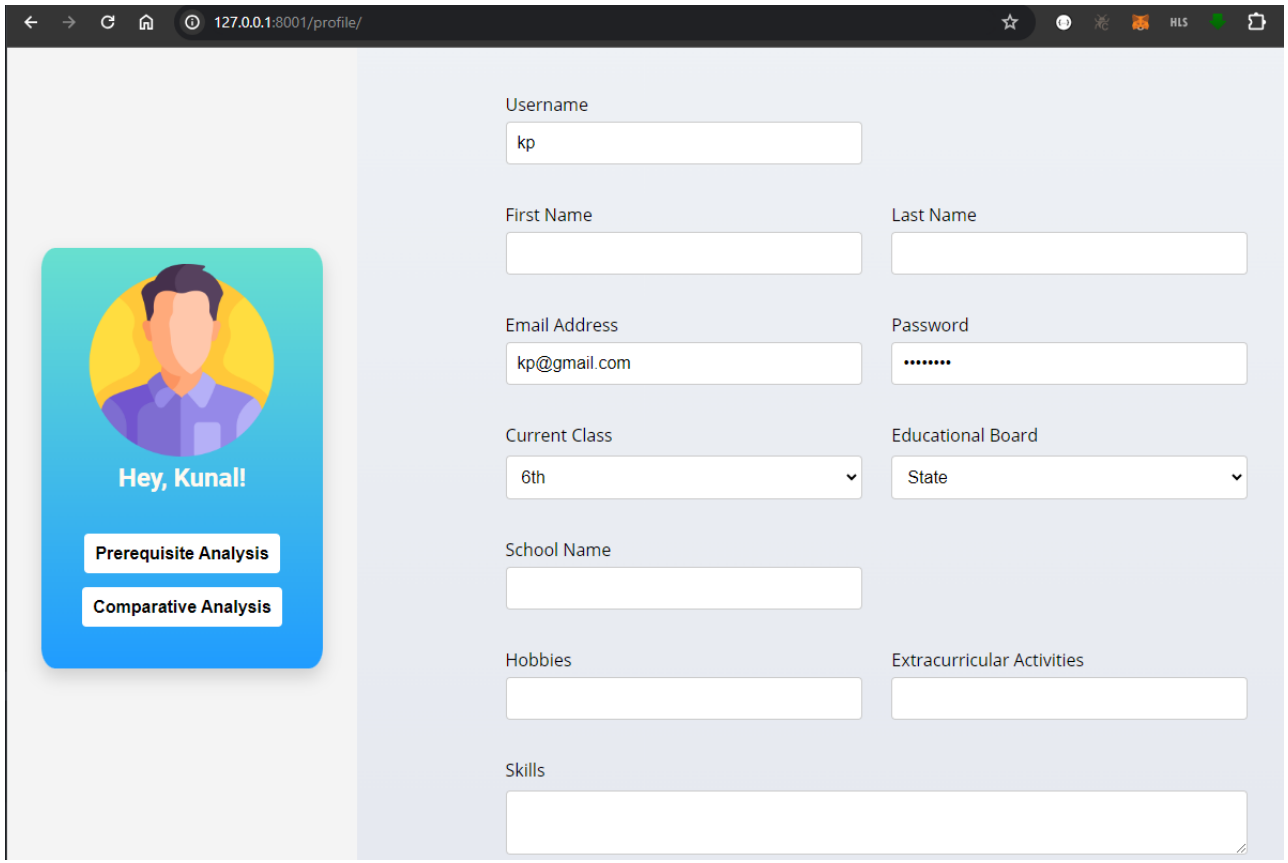


Implementation - Figure 2



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...