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DEPARTMENT OF COMPUTER ENGINEERING
ARTIFICIAL INTELLIGENCE MINI PROJECT

ATS SOFTWARE RESUME ANALYZER

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INTRODUCTION

- The "ATS Resume Analyzer" is an advanced tool designed to automate the time-consuming process of reviewing resumes by utilizing machine learning and natural language processing techniques.

- Its main goal is to extract key information from resumes, such as skills, experience, education, and achievements, to assist employers, recruiters, or HR professionals in efficiently assessing candidate suitability for specific job roles, thereby saving time and resources in the hiring process.

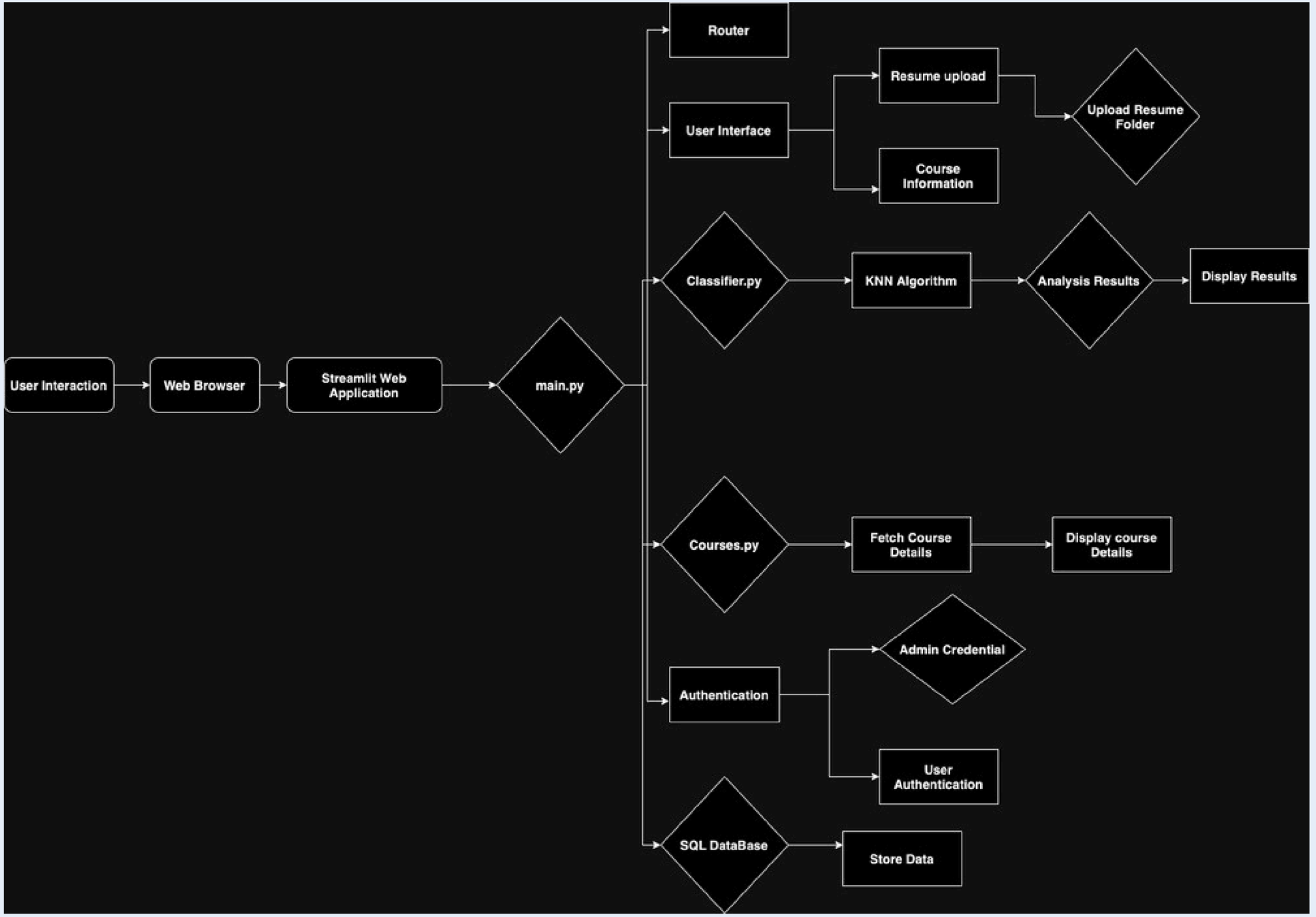
Key Features

- **User's & Admin Section:** Dual access portals for both users and administrators, ensuring seamless interaction and management.
- **Resume Score:** Provides users with a quantitative assessment of their resumes, aiding in gauging competitiveness.
- **Career Recommendations:** Tailored suggestions for career paths based on resume analysis, enhancing decision-making.
- **Resume Writing Tips Suggestions:** Personalized advice and suggestions for improving resume quality and effectiveness.

- **Courses Recommendations:** Recommends relevant courses based on resume content, fostering skill enhancement and career growth.
- **Skills Recommendations:** Identifies areas for skill improvement based on resume analysis, guiding users towards skill development opportunities.
- **YouTube Video Recommendations:** Curates YouTube video recommendations pertinent to career development, offering additional resources for users' advancement.

ARCHITECTURE

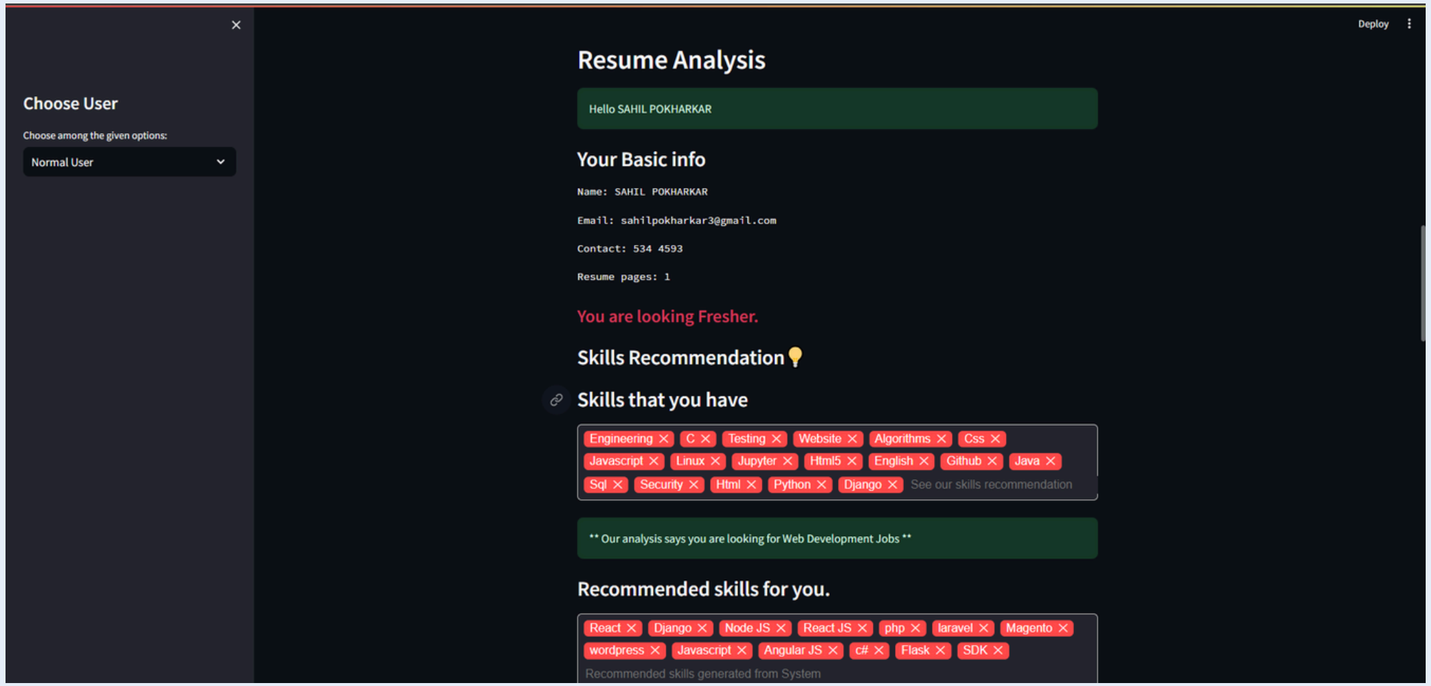
- ATS system uses a web interface for users to upload resumes and choose courses.
- The logic layer analyzes resumes using KNN algorithm (classifier.py) and retrieves course details (course.py).
- An SQL database stores applicant data, course details, and user accounts (admin/user).
- Secure authentication ensures role-based access control for data management and course applications.


User Interaction
Web Browser
Streamlit Web Application
main.py
Router
User Interface
Resume upload
Upload Resume Folder
Course Information
Classifier.py
KNN Algorithm
Analysis Results
Display Results
Courses.py
Fetch Course Details
Display course Details
Authentication
Admin Credential
User Authentication
SQL DataBase
Store Data

TECHNOLOGIES

- **Python:** Used as the primary programming language for development.
- **Streamlit:** Enables the creation of interactive web applications for displaying resume analysis results.
- **KNN Algorithm:** Employed for tasks like candidate classification or similarity analysis based on resume content.
- **SQL Database (MySQL):** Stores resume data, analysis results, and other relevant information.
- **XAMPP:** Facilitates local hosting of the application during development and testing.
- **YouTube API:** Integrated for fetching tutorial videos or resources related to career guidance.

SCREENSHOTS



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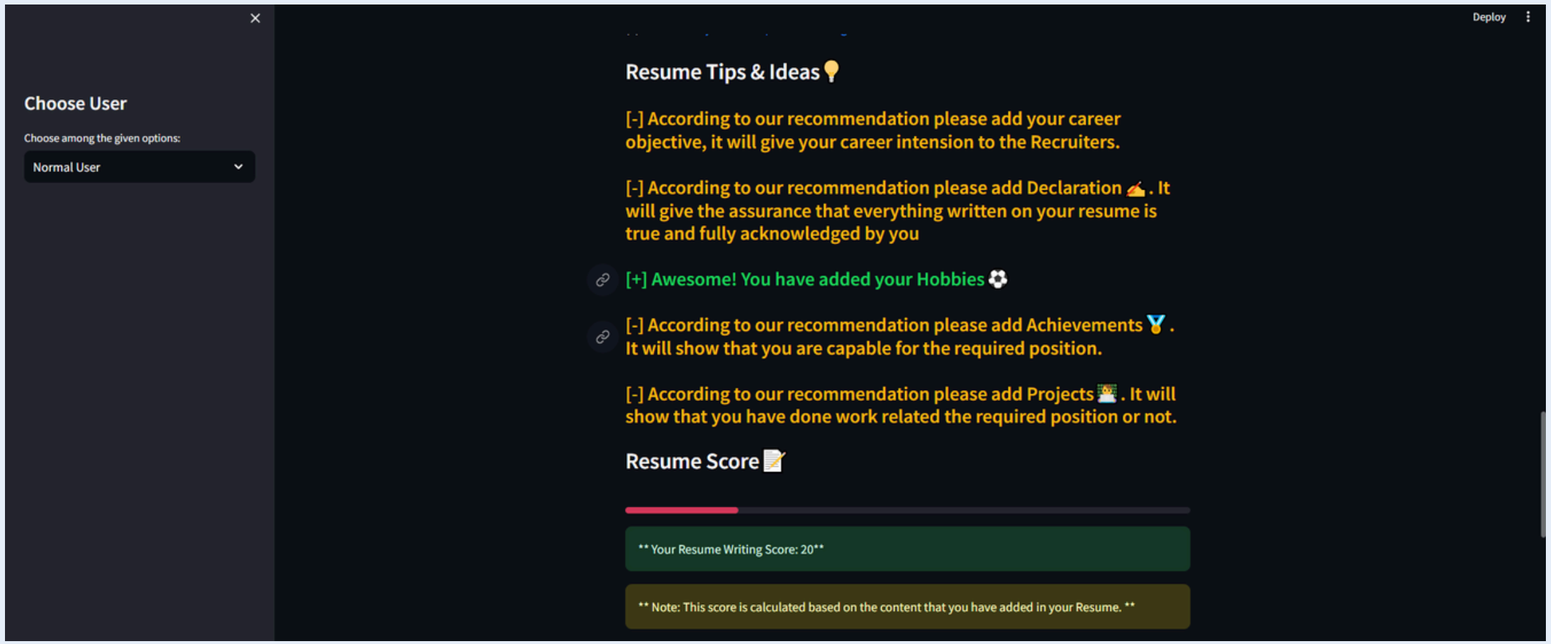

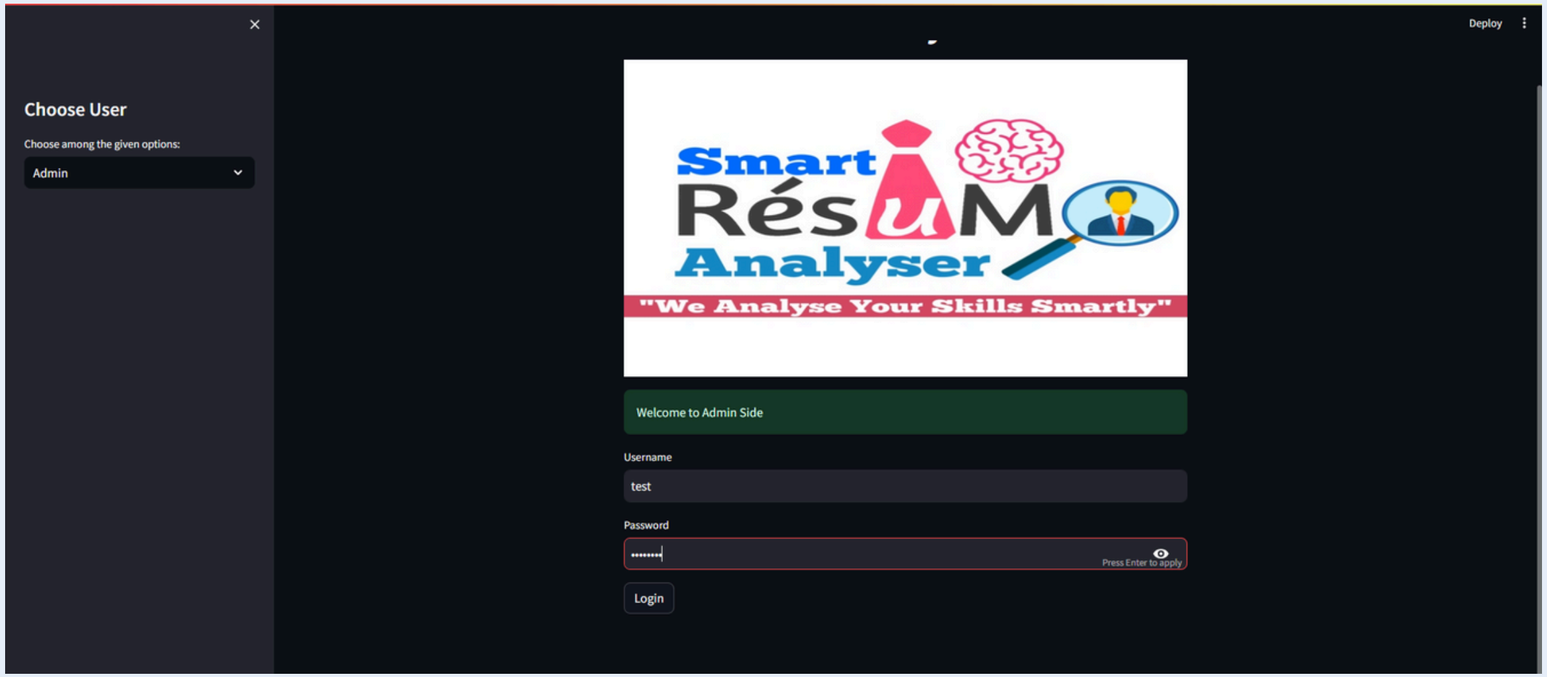

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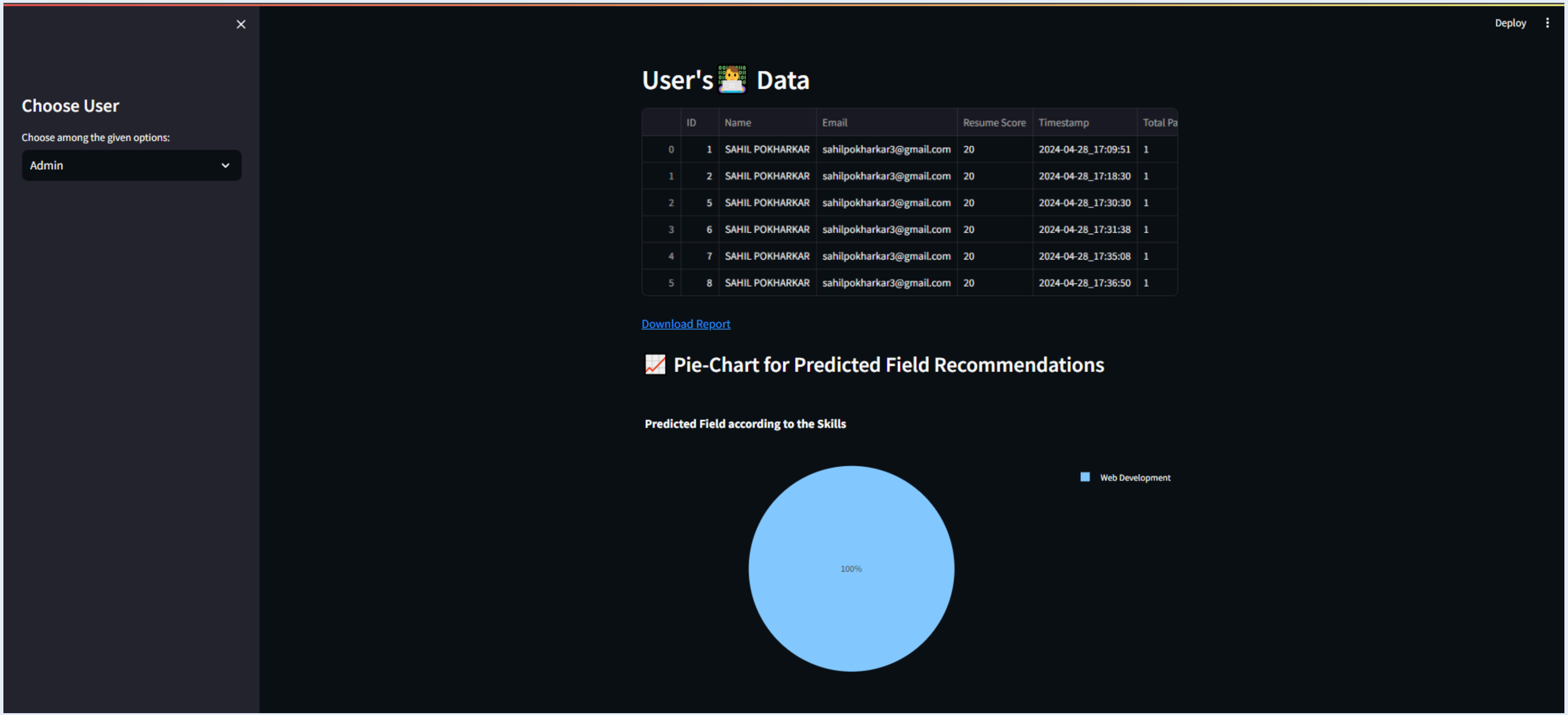

FUTURE SCOPE

- **Advanced Machine Learning Models:** Integrate more sophisticated machine learning algorithms for resume parsing, analysis, and recommendation generation to enhance accuracy and efficiency.
- **Deep Learning Architectures:** Explore the use of deep learning architectures such as neural networks for more nuanced resume analysis, enabling the system to capture complex patterns and relationships.
- **Real-time Collaboration Features:** Introduce real-time collaboration features, enabling recruiters and candidates to interact and provide feedback on resumes, fostering a more engaging and dynamic recruitment process.
- **Feedback Mechanism:** Implement a feedback mechanism where users can provide feedback on the accuracy of recommendations and suggestions, facilitating continuous improvement of the system.

REFERENCES

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- https://www.phpmyadmin.net/docs/
- https://pymysql.readthedocs.io/en/latest/
- https://stackoverflow.com/
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THANK YOU