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Development Log for Career Path Prediction and Guidance System

Development Log Overview

The development log captures the progress, tasks completed, challenges faced, and any modifications made during the development of the Career Path Prediction and Guidance System. This log will be updated regularly to reflect the ongoing work and decisions made throughout the project.

Development Log Entries

Date	Task/Activity	Description	Status	Owner
July 1, 2024	Project Kickoff	Initial meeting with stakeholders to discuss project objectives and scope.	Completed	Project Manager
July 2, 2024	Project Charter	Drafted and shared the project charter with stakeholders for feedback.	Completed	Project Manager
July 6, 2024	Data Collection	Identified data sources and began data scraping using Pandas.	Completed	Data Scientist
July 8, 2024	Data Cleaning	Cleaned the collected data by handling missing values and removing duplicates.	Completed	Data Scientist
July 12, 2024	Data Exploration	Conducted exploratory data analysis (EDA) to understand data distributions and correlations.	Completed	Data Scientist
July 13, 2024	Feature Engineering	Developed new features based on EDA findings (e.g., GPA trends).	Completed	Data Scientist
July 20, 2024	Model Development	Started developing the Graduation Year Prediction model using Linear Regression.	Completed	Data Scientist
July 26, 2024	Model Training	Trained the Graduation Year Prediction model and evaluated performance.	Completed	Data Scientist

Date	Task/Activity	Description	Status	Owner
July 27, 2024	Placement Prediction Model	Initiated development of the Placement Prediction model using Decision Trees.	Completed	Data Scientist
August 3, 2024	Deep Learning Exploration	Explored deep learning frameworks (e.g., TensorFlow) for potential model enhancements.	Completed	Data Scientist
August 10, 2024	System Development	Began designing the application interface using Streamlit.	In Progress	Software Engineer
August 17, 2024	Testing Phase	Initiated unit testing for individual components of the system.	Completed	Tester
August 19, 2024	Integration Testing	Conducted integration testing to ensure all components work together seamlessly.	Completed	Tester
August 20, 2024	Deployment Preparation	Prepared the application for deployment, ensuring all functionalities are in place.	Completed	Software Engineer
August 21, 2024	Documentation	Started documenting the project process and findings for the final report.	Completed	Technical Writer

Summary of Challenges and Resolutions

- Data Quality Issues:** Encountered challenges with missing and inconsistent data. Resolved by implementing a more robust data cleaning process and utilizing data augmentation techniques.
- Model Performance:** Initial models showed signs of overfitting. Addressed this by applying regularization techniques and cross-validation methods.
- Stakeholder Feedback:** Received mixed feedback on the application interface design. Conducted additional meetings to clarify requirements and gather more input.

Next Steps

- Complete the frontend development of the application interface using Streamlit.
- Gather user feedback post-deployment for future improvements.

This development log will be maintained throughout the project to ensure transparency and effective tracking of progress and challenges. Regular updates will be shared with the project team and stakeholders.