**Data Collection and Preprocessing Phase**

| Date | June 2024 |
| --- | --- |
| Team ID | 739836 |
| Project Title | Predictive Modeling for H1-B Visa Approval Using Machine Learning |
| Maximum Marks | 2 Marks |

**Data Collection Plan & Raw Data Sources Identification Template**

To establish a comprehensive data collection plan and identify raw data sources for the H1-B visa approval process. This will ensure meticulous data curation and integrity, facilitating informed decision-making in every analysis and decision-making endeavor.

**Data Collection Plan Template for H1-B Visa Approval**

| **Section** | **Description** |
| --- | --- |
| Project Overview | Aims to improve the H1-B visa approval process by analyzing key factors such as application volume, approval rates, processing times, policy changes, and applicant demographics. The goal is to identify bottlenecks, streamline procedures, and provide more transparency and predictability in the approval process. |
| Data Collection Plan | Data will be collected from various sources including USCIS application databases, historical approval and rejection rates, processing time records, policy change announcements, demographic information of applicants, and feedback from applicants and employers. |
| Raw Data Sources Identified | Gathering data from USCIS application and approval databases, historical records of visa processing times, official announcements and updates on policy changes, demographic information from applicant profiles, surveys and feedback from applicants and employers, and third-party immigration statistics and reports. |

**Raw Data Sources Template for H1-B Visa Approval**

| **Source Name** | **Description** | **Location/URL** | **Format** | **Access Permissions** |
| --- | --- | --- | --- | --- |
| USCIS Application Data | Detailed records of H1-B visa applications, including application dates, applicant details, employer information, and outcomes. | USCIS Data Hub | CSV, Excel | Public |
| Historical Approval Rates | Historical data on approval and rejection rates for H1-B visas. | USCIS H-1B Reports | PDF, Excel | Public |
| Processing Time Records | Average processing times for H1-B visa applications over different periods. | USCIS Processing Times | Web page | Public |
| Policy Changes | Official announcements and detailed records of policy changes affecting H1-B visa processing. | Federal Register | Web page, PDF | Public |
| Applicant Demographics | Data on demographics of H1-B visa applicants, including nationality, education level, and field of employment. | USCIS Annual Report | PDF, Excel | Public |
| Employer Feedback Surveys | Surveys and feedback from applicants regarding their experience with the H1-B visa process. | Internal Company Surveys | CSV, Excel | Private (with access) |
| Third-Party Immigration Reports | Reports and studies from third-party organizations on H1-B visa trends and statistics. | Migration Policy Institute | PDF, Web page | Public |