

# Personality Prediction System

The Personality Prediction System is an AI-powered application designed to analyze Resumes or CV provided by candidates.

# Key Features

## Resume Analysis

Supports multiple file formats for analyzing resumes.

## Personality Trait Prediction

Utilizes machine learning models to predict personality traits.

## Web Interface

Implemented using Flask, allowing users to upload resumes for analysis.



# Technologies Used

## Programming Languages

Python (for backend), HTML, CSS, JavaScript (for web interface)

## Libraries/Frameworks

Flask (web development), Pandas (data handling), NLTK (NLP)

## Tools

PyPDF2, textract, docx (for text extraction from resumes), Pycharm

# Techniques Used

## ① Feature Engineering

This involves the creation of new features from the raw data to enhance predictive model performance.

## ② Natural Language Processing (NLP)

Tokenization, stemming, lemmatization, and part-of-speech tagging are among the methods used for NLP.

## ③ Machine Learning Algorithms

We leverage machine learning algorithms including Linear Regression, Random Forest, and Neural Networks to analyze and predict patterns in data.

## ④ Text Embeddings and Word Vectors

Techniques like Word2Vec, GloVe, or BERT are used to convert words into numerical vectors, capturing semantic relationships between words

# Implementation Details

1

## Resume Processing and Trait Assignment

Extracts textual data from resumes and assigns personality traits to candidates.

2

## Web Interface and User Interaction

Implements a [Flask](#)-based web application for resume uploads and analysis results.

3

## AI Interaction for Trait Description

Interacts with Google's GenerativeAI service to describe a candidate's personality based on assigned traits.

# Data Management and History

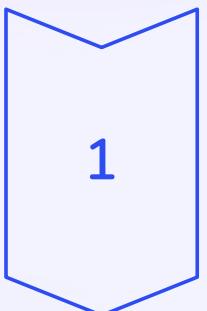
## ① Data Handling

Stores extracted resume details in a CSV file for historical reference.

## ② AI Interaction

Utilizes Google's [GenerativeAI](#) service to generate conversational responses describing a candidate's personality traits.

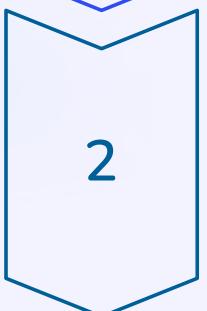
# Use Cases



1

## Recruitment Agencies

Simplifies candidate evaluation processes by automating personality analysis.



2

## HR Departments

Efficiently screens job applicants based on personality traits aligned with specific job roles.



3

## Employers/Managers

Facilitates informed decisions in selecting candidates who fit company culture and job requirements.



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# Conclusion

- ▼ The Personality Prediction System is a sophisticated tool that amalgamates machine learning, NLP, and web technologies.
- By automating personality assessment and leveraging AI for trait description, this system empowers recruiters and employers to make better-informed hiring decisions.