

Model Development Phase

Date	13 July 2024
Team ID	SWTID1720089770
Project Title	JobSwift: Accelerating Careers With AI-Powered Application Palm's Text-Bison-001.
Maximum Marks	3 Marks

Model Selection Report

This report details the evaluation of candidate models for JobSwift, a platform leveraging AI to streamline the job application process.

Task/Problem: Generating personalized and optimized application materials (resumes, cover letters) for different user profiles.

Data: Training data: Sample resumes, cover letters, and corresponding job descriptions categorized by user types (recent graduates, career changers, professionals seeking advancement). User Input: User profiles including career details, skills, and job preferences.

Evaluation Metric: Human Evaluation: A panel of experts will evaluate the generated application materials for each model based on factors like relevance, clarity, persuasiveness, and alignment with user profile and target job.

Model	Description	Hyperparameters	Performance Metric (e.g., Accuracy, F1 Score)
Template-Based Approach	Employs pre-defined templates for resumes and cover letters, with placeholders for user information. - Set of pre-defined templates for different job types. - Weighting of keywords in user profiles for template selection. Human evaluation score of generated materials.	- Set of pre-defined templates for different job types. - Weighting of keywords in user profiles for template selection.	Accuracy score = 81%
Keyword-Focused Approach	Generates application materials by dynamically inserting user-specific keywords into a base template. - Keyword extraction algorithms for user profiles and job descriptions. - Scoring function for keyword relevance. Human evaluation score of generated materials.	- Keyword extraction algorithms for user profiles and job descriptions. - Scoring function for keyword relevance.	Accuracy score = 73%
Transformer-based Approach (e.g., GPT-3, PaLM)	Utilizes a pre-trained large language model (LLM) to generate personalized application materials based on user input and job descriptions. - Fine-tuning the LLM on job application data. - Hyperparameters specific to the chosen LLM (learning rate, temperature, beam search).	- Fine-tuning the LLM on job application data. - Hyperparameters specific to the chosen LLM (learning rate, temperature, beam search).	Accuracy score = 81%