SHL Assessment Recommendation System – 1-Page Approach Document

Objective

To recommend the most relevant SHL assessments based on a natural language query or job description, improving over manual keyword-based search.

Stack & Tools

- **Python + Pandas** – Backend, CSV loading, and data preprocessing

- **SentenceTransformers (all-MiniLM-L6-v2)** – Semantic encoding and similarity search

- **Streamlit** – Final UI for user interaction

- **Gradio** – for exposing a temporary API endpoint that returns results in JSON

- **Google Colab** – Cloud-based dev due to local system constraints

- **GitHub** – Hosted all source code, models, and CSV

Dataset

- Manually compiled CSV from SHL Product Catalog

- 20+ rows with: Assessment Name, URL, Remote Testing, Adaptive/IRT, Test Type, Duration

Method

1. **Preprocessing:** Combined "Assessment Name" + "Test Type"

2. **Encoding:** Used all-MiniLM-L6-v2 to embed both the descriptions and input query

3. **Semantic Search:** Calculated cosine similarity and returned top-K matches

4. **Output:** Tabular format with required attributes

Submission URLs

- **Working Demo (Streamlit):** shl-recommendation-engine.streamlit.app

- **API Endpoint (Gradio):** [Live via Gradio share=True] *(link generated per run)*

- **GitHub:** github.com/rishi02102017/shl-recommendation-engine

Evaluation (Optional)

Metric	Value
Mean Recall@3	0.778
MAP@3	0.778