

# Recommendation Engine: Approach & Implementation

## Advanced AI-Powered Assessment Matching System

### 4.1 Semantic Understanding

#### 1. Introduction

*The Assessment Recommendation Engine is a sophisticated system designed to match job requirements with candidate profiles.*

#### 2. Core Approach

##### 2.1 Retrieval-Augmented Generation (RAG)

- Excel upload and validation
- Data Processing: Cleaning and normalization

- JSON knowledge base for knowledge storage and retrieval

- FAISS index creation and optimization
- Sentence Transformers for semantic embeddings

- Python backend with scikit-learn and FAISS

- Streamlit frontend with responsive UI

#### 3. Technical Implementation

##### 3.1 Architecture Overview

#### 5. Results & Impact

##### 5.1 Accuracy Improvements