# COMPARISON OF TRAINING PROGRAMS WITH AN AI PLATFORM

## FACILITATING ACADEMIC EQUIVALENCE FOR TUNISIAN STUDENTS IN GERMANY

# GENRAL INTRODUCTION

An advanced AI-driven platform has been developed to facilitate diploma recognition for Tunisian students seeking equivalence with German training programs.

# PROBLEM STATEMENT

Diploma Recognition is a Complex Process

- **Time-Consuming:** Assessments take weeks or months.

- **Expert-Dependent:** Requires specialists familiar with both curricula.

- **Inconsistent & Subjective:** Different reviewers may interpret programs differently.

- **Limited Scalability:** Slow adaptation to evolving standards.

A solution is needed to automate and streamline this process, ensuring fairness, accuracy, and accessibility.

# SOLUTION

◢ **Faster Evaluation** - Reduce processing time from months to hours.

◢ **Objective & Transparent Comparisons** – AI ensures fairness.

◢ **Scalability** – Handles large-scale document processing efficiently.

◢ **Enhanced Employability** – Aligns skills with German market needs.

This solution reduces processing time, improves accuracy, and ensures a standardized and scalable approach to diploma recognition.

# THAMM PLUS – AI-DRIVEN PROCESS ARCHITECTURE

1. Automated Extraction of Educational Program Structures

2. AI Based Translation (German → French)

3. AI-Powered Comparison – Identifying Similarities & Gaps

4. Expert Review & Continuous Model Improvement

5. Intelligent Assistant

# 1.Automated Extraction of Educational Program Structures

◆ **Rule-Based Extraction:** Fast processing for structured documents.

◆ **ML-Based Extraction:** AI handles complex, unstructured formats.

◆ **Standardized Output:** All extracted data is mapped into:

- Core subjects or training units
- Learning fields or competencies
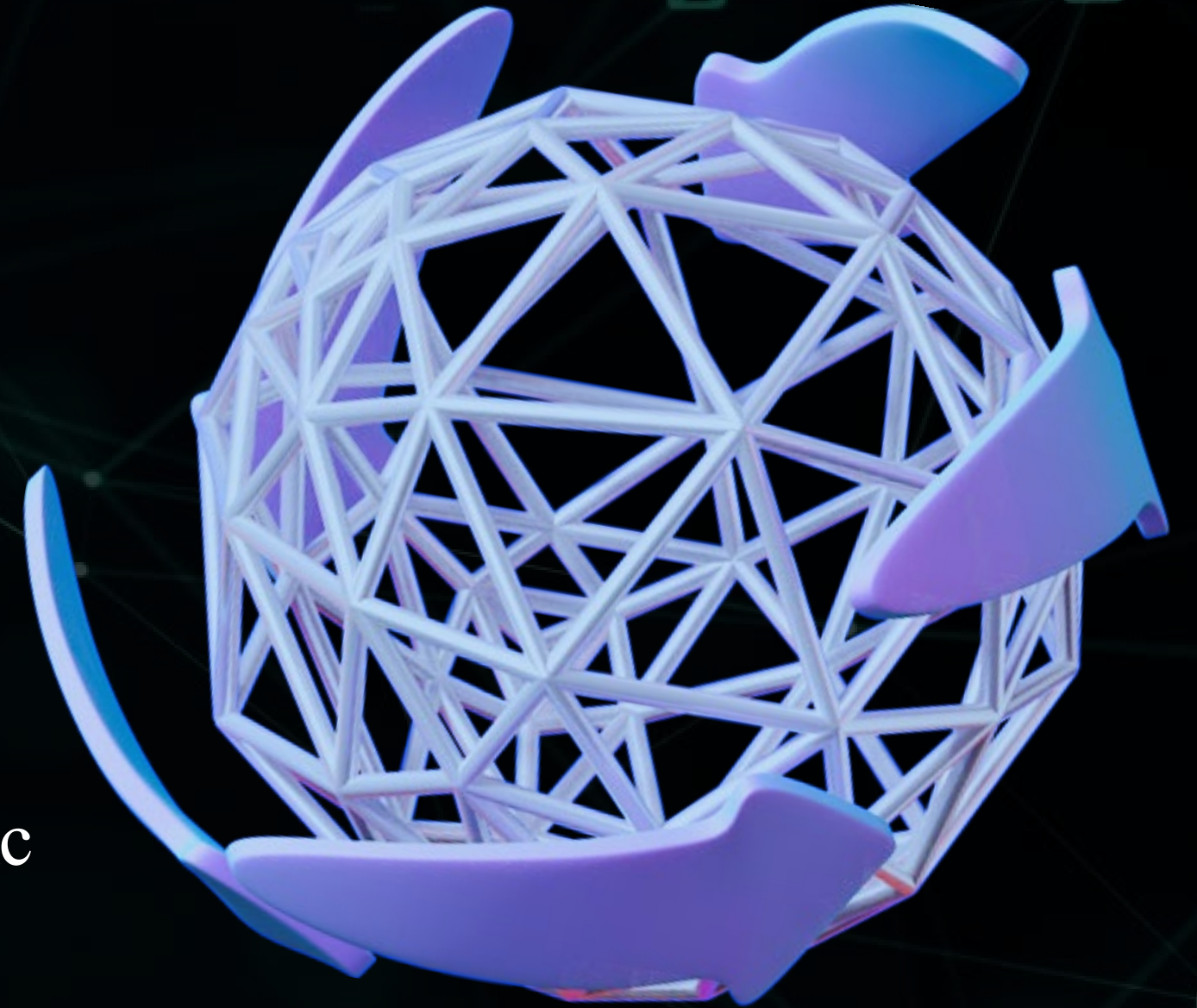- Performance criteria or learning outcomes
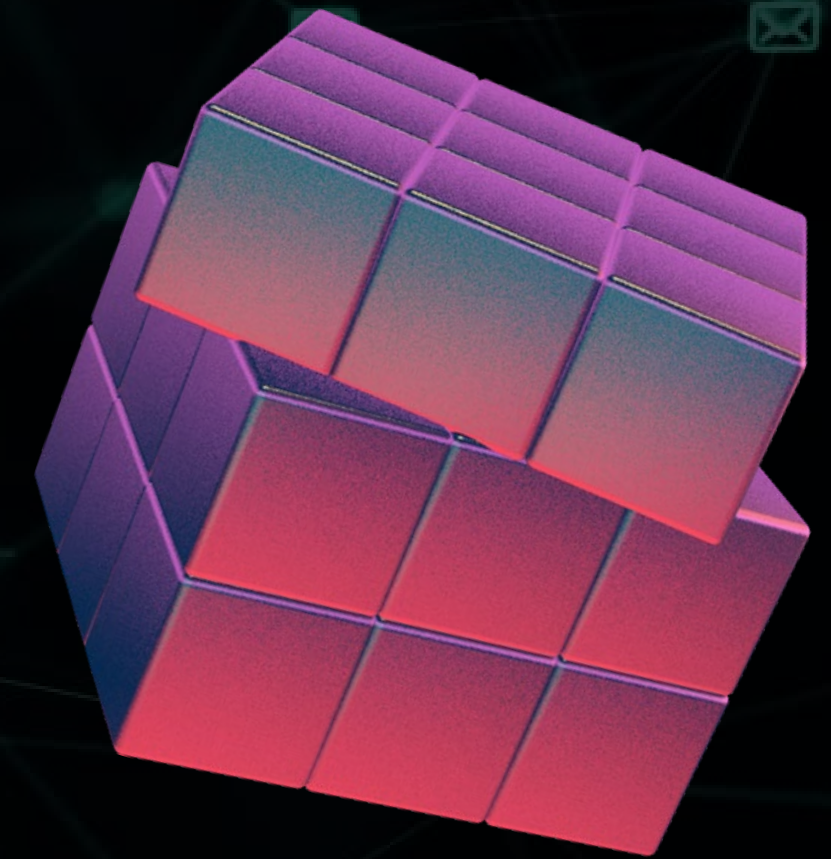
# 2. AI BASED TRANSLATION

Ensuring Accurate and Domain-Specific Translations

## Why AI Translation is Critical:

- Custom-Built Neural Machine Translation (NMT) ensures accuracy.

- Trained on Educational Data for precise terminology.

- Benchmarked Against DeepL to maintain linguistic quality.

# 3. AI-Powered Comparison – Identifying Similarities & Gaps

TYPES OF COMPARISONS:

🔒 **Profile based comparison**

Identifies similar professional tasks and gaps by analyzing Europass-extracted tasks and the specific competencies of Tunisian programs.

🔒 **Program based comparison**

Compares entire academic programs to identify similar objectives and to detect gaps

🔬 **Tokenization & Embedding:** Converts text into numerical representations.

🔬 **Similarity Calculation:** Uses cosine similarity & transformer-based attention.

🔬 **Identification of Similar Objectives & Gaps:** After similarity calculations, the system identifies aligned objectives and key differences between curricula.

🔬 **Categorization of Gaps:** A matrix summarizes shared objectives, detected gaps, and skills to be developed

# 4.Expert Review &Continuous Model Improvement
## The Human-AI Collaboration for Accuracy & Trust

**Why Expert Review is Essential:**

◆ Refining Extraction Results

◆ Validating Translations

◆ Adjusting Comparisons

◆ Continuous Improvement

# 5.Intelligent Assistant

**Our AI-powered assistant is designed to provide instant support by answering questions related to:**

- Lexicon & Terminology – Clarifying key terms and concepts.

- Platform Usage– Guiding users on how to navigate and utilize the system.

- Training Programs – Providing a list of Tunisian and German programs and their details.

# IV-Conclusin

THAMM Plus revolutionizes diploma recognition by combining AI automation with expert validation to create a faster, fairer, and scalable academic equivalency process.

- Eliminates delays in diploma recognition.
- Uses AI for accurate translation and curriculum analysis.
- Bridges academic gaps with tailored learning recommendations.
- Facilitates student mobility and career advancement.

# THANK YOU!

FOR YOUR ATTENTION