

AI Pitch Analysis Model Report

1. Introduction

The AI Pitch Analysis Model is designed to evaluate startup pitch decks using an LLM-powered scoring system. It extracts and analyzes key sections such as Problem, Solution, Market, Business Model, Financials, and Team. The model provides an overall pitch score and detailed feedback on strengths and weaknesses.

2. Methodology

The model follows a structured approach:

2.1 Text Extraction & Preprocessing

- The model takes raw text input from a pitch deck.
- Text is preprocessed by removing unnecessary elements such as extra spaces and formatting inconsistencies.

2.2 Feature Engineering

- Key sections are identified: Problem, Solution, Market, Business Model, Financials, and Team.
- A set of predefined quality patterns is assigned to each section to evaluate relevance and completeness.

2.3 Scoring Model

- The model uses a pre-trained **BERT-based** language model to assess text relevance.
- Each section is scored based on the presence of predefined quality patterns.
- Scores are assigned between 0 and 100, factoring in text relevance and completeness.

2.4 Strength & Weakness Analysis

- The model compares extracted text against ideal content structures.
- It identifies missing or weak aspects and provides targeted improvement suggestions.

2.5 Overall Score Computation

- Section-wise scores are computed based on content relevance.

- Weighted averaging is applied to compute an overall pitch score.

3. Insights & Observations

- **Textual Relevance:** Startups with well-structured content and industry-relevant keywords tend to score higher.
- **Importance of Business Model & Financials:** Many pitch decks perform well on Problem/Solution but lack strong financial projections and clear revenue models.
- **Market Validation:** The presence of strong market research data significantly improves scores.
- **Team Section Quality:** Highly rated decks emphasize founder expertise and advisory support.

4. Implementation & Code Overview

- **BERT Model:** Used for language understanding and quality pattern matching.
- **Pattern-Based Evaluation:** Identifies key elements required for each pitch deck section.
- **Weight-Based Scoring:** Ensures that critical sections like Market and Business Model receive appropriate importance.

5. Conclusion

The AI Pitch Analysis Model provides an efficient way to evaluate startup pitch decks using natural language processing techniques. By automating the assessment process, it helps startups refine their pitches and improve their chances of securing investment.