CDE4301A AI-Pitch Evaluation for Enhanced Entrepreneurial Learning

Khoo Eng Tat, Chua Hui Shi Zeta, Toh Yi Hui, Lim Teng Hong
Engineering Design and Innovation Centre (EDIC),
College of Design and Engineering
Track A – Teaching Innovation with GenAI (Use AI)

CDE4301A Ideas to Startup Course Objectives

- Final-year module for Innovation & Design Programme students
- Develop viable & sustainable ventures from project ideas
- Learn customer & market identification
- Build MVPs using engineering & design skills
- Design viable business models
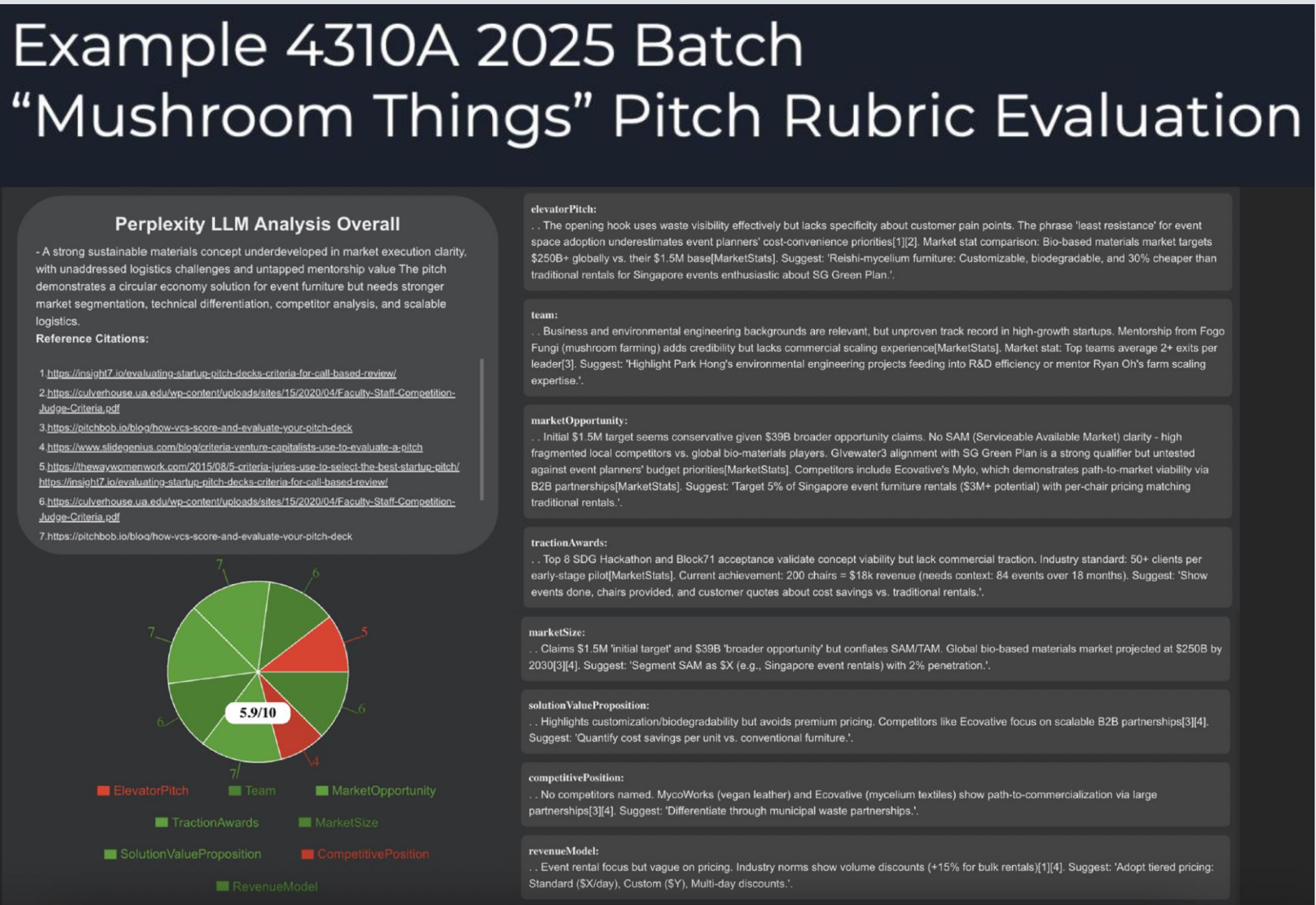- Deliver investment pitch during Demo Day

Challenges Addressed by Integrating GenAI

- Students lack experience in pitching
- AI Pitch Evaluator enables self-paced, repeated pitch practice
- Provides feedback on content, delivery & audio analysis
- Realtime Market Aware Feedback aligned to assessment rubric
- Builds confidence & reduces anxiety for real-world scenarios

Methodology

- Generative AI used for personalised feedback
- Hybrid LLM approach:
  - Sonar Perplexity → real-time market research & critical strategic feedback
  - "Shark Tank" investor persona → targeted guidance & coaching
- Simulated high-pressure time-based sessions with constructive AI feedback
- Empowers refinement of pitches & business models
- Bridges classroom learning with startup practice
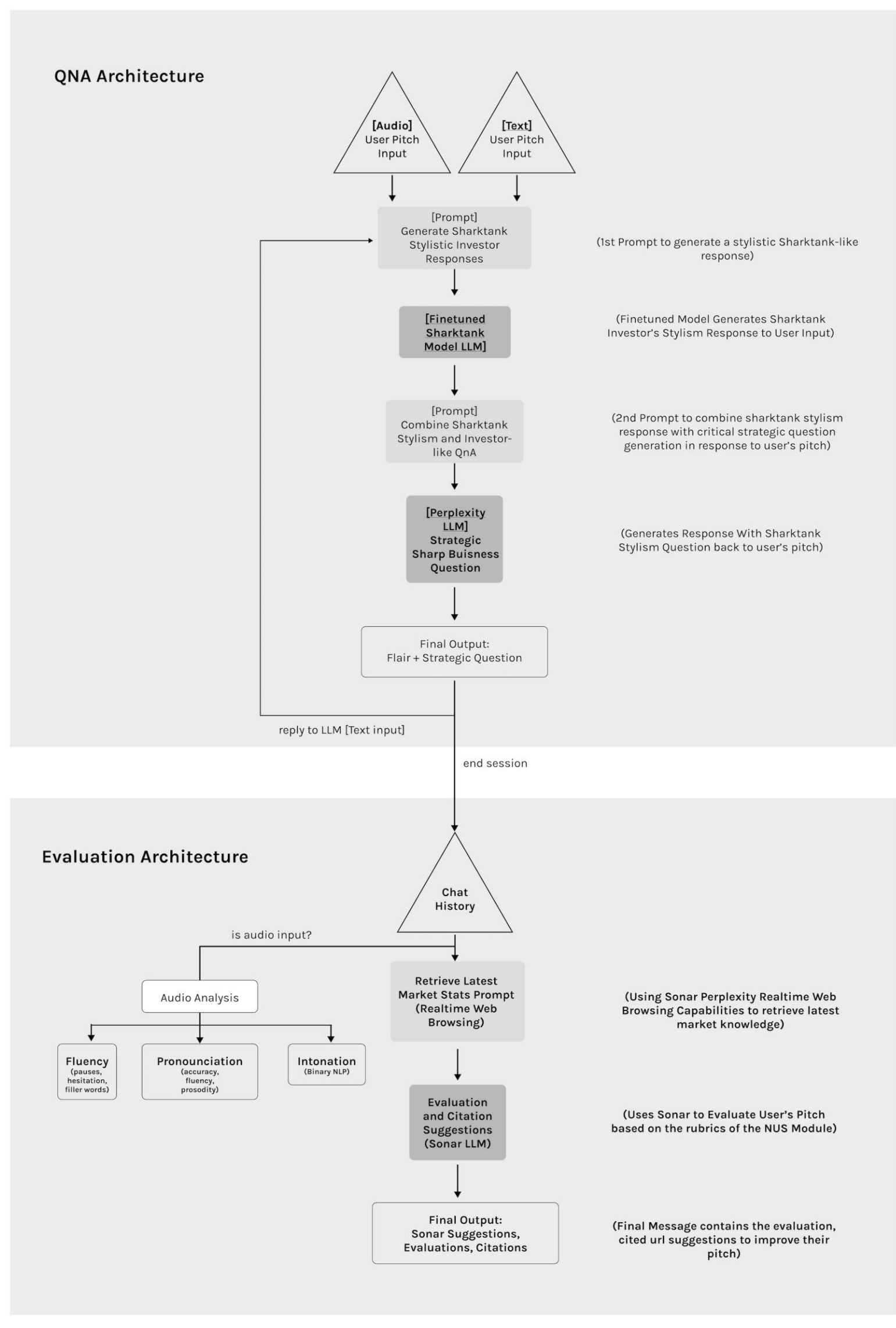
AI Pitch Evaluation

Assesses pitches with Sonar LLM against NUS 4310A Exam Rubrics, provides improvement suggestions using current market insights.

Contact:

Associate Professor Khoo Eng Tat etkhoo@nus.edu.sg

System Architecture

Simulates Shark Tank-style investor responses using a fine-tuned LLM, blending flair with strategic questions via Perplexity LLM's real-time market data.

Audio Analysis

Pronunciation, Intonation, and Fluency score of student's pitch, together with detailed annotations on pitch transcript.