

# Intel AI PC Project Pitch

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# Multimodal Reading Tutor

For elementary school students

# The Project Idea

- **interactive and engaging tool to assist elementary students in developing their english language skills**
  - Reading
  - Analytical thinking
- **Possible features:**
  - Simple sentences
  - Storytelling
  - Sounds (letters and phonemes)
  - Track reading level / individualization

- **Simple sentences**

- Gives examples of simple sentences
- Uses speech recognition to hear that the student is reading correctly
- Uses pictures to describe the word when it hears long hesitation / mumbling / mispronunciation

- **Storytelling**

- Makes a picture book (each sentence gets a picture)
- It reads to you or you read to it
- Asks you questions about the reading to develop analytical thinking skills

- **Sounds**

- Teaches letters of the alphabet & phonemes
- Listens to user say those letters and their sounds

# Methodology / Implementation

## 1) Develop core functionalities

- a) Intel® OpenVINO™ Toolkit, Intel oneAPI, PyTorch, HuggingFace datasets
- b) Meta AI's Wav2Vec speech & phoneme recognition
- c) Fine tuned Llama for making reading assignments & question prompts
- d) DALL-E Mini for picture generation

## 2) Develop a simple UI

- a) React frontend, Django backend

## 3) Integrating UI and models using OpenVino

## 4) Testing

# The Impact

- **Educational Accessibility**

- accessible and affordable tutoring option for students, particularly those in under-resourced areas.

- **Engaging Learning**

- Encourages interactive and multimodal learning, making reading enjoyable and engaging for young learners.

- **Scalability**

- Offers a scalable solution that can be deployed across various educational institutions to support widespread reading development.

Thank you for your time!

