BACKLOG DOCUMENT

Task Name	Story	Sprint Ready	Priority	Status	Story Points	Assigned To	Sprint
Setup Project Repository	Initialize Git repository and setup project structure for collaboration.	Yes	High	Completed	3	All	Sprint 1
Define System Architecture	Design the high-level system architecture including speech recognition, NLP, and synthesis modules.	Yes	High	Completed	5	Berrin Uzun	Sprint 1
Research LLM Models for Turkish Text Generation	Conduct research on LLMs for Turkish text generation to support NLP tasks like morphological analysis and sentence generation.	Yes	High	Completed	5	All	Sprint 1
Research LLM Models for Turkish Speech-to-Text (STT)	Identify and evaluate pre-trained LLM or ASR models capable of accurately converting Turkish speech to text to ensure compatibility with downstream NLP processing.	Yes	High	Completed	5	All	Sprint 1

Research LLM Models for Turkish Text-to-Speech (TTS)	Research large language or deep learning models for synthesizing natural-sounding Turkish speech from text to be used in the speech synthesis module.	Yes	High	Completed	5	All	Sprint 1
Select Speech Recognition Model	Research and select a suitable pre-trained speech recognition model for Turkish language.	Yes	High	Completed	8	Doğa Paksoy	Sprint 1
Develop Speech Recognition Module	Implement the speech recognition component for Turkish language, including integration with model.	Yes	High	Completed	13	Doğa Paksoy	Sprint 2
Build Speech Synthesis Module	Implement the text-to-speech synthesis component, ensuring natural-sounding voice output in Turkish.	Yes	High	Completed	13	Rana Çetinkaya	Sprint 2
Integrate Speech Recognition and NLP	Integrate the speech recognition module with the NLP module to process recognized speech.	Yes	Medium	Completed	8	Berrin Uzun	Sprint 3

Integrate NLP and Speech Synthesis	Connect NLP output with speech synthesis module for text-to-speech generation.	Yes	Medium	Completed	8	Berrin Uzun	Sprint 3
Integrate Sound Isolation	Implement sound isolation techniques to improve accuracy in speech recognition by filtering noise.	Yes	Medium	Completed	8	Doğa Paksoy	Sprint 3
Test Speech Recognition Accuracy	Evaluate the performance of the speech recognition model using test data for accuracy.	Yes	High	Completed	5	Doğa Paksoy	Sprint 3
Test Speech Synthesis Naturalness	Evaluate the quality of the synthesized speech, focusing on Turkish accent and intonation.	Yes	Medium	Completed	5	Rana Çetinkaya	Sprint 3
Offline Fine-Tuning	Fine-tune the speech recognition model offline using domain-specific Turkish data for better accuracy.	Yes	High	Completed	13	All	Sprint 4
Create User Interface for Demonstration	Build a simple UI for testing speech recognition and synthesis in real-time.	Yes	Low	Completed	8	Berrin Uzun	Sprint 4

Optimize System Performance	Optimize processing speed and memory usage for real-time applications.	No	Medium	Completed	8	Berrin Uzun	Sprint 4
Fix Bugs in Integration	Debug and resolve any issues in the integration between modules (Speech Recognition, NLP, Synthesis).	Yes	High	Completed	5	Doğa Paksoy	Sprint 4
Generate Reports	Generate detailed reports on the system's performance, including speech recognition accuracy, synthesis quality, and system efficiency.	Yes	Medium	Completed	5	Rana Çetinkaya	Sprint 5
Final System Testing and Debugging	Perform full-system testing and debugging, fix any remaining issues, and improve stability.	No	High	Completed	8	All	Sprint 5