

A stylized illustration of Hogwarts Castle at night, perched on a rocky cliff. The castle features numerous spires and towers, some with glowing windows. The sky is a deep purple and blue, with faint, wispy clouds. The overall mood is magical and mysterious.

Hogwarts Spellstorm: A Magical VR Experience

Members: Roi Solomon - 208183251, Yaron Hod - 206354789

Project Overview



Immersive VR Spell-Casting

Set in the beloved Harry Potter universe



Dual-Input System

Combines hand gesture & voice recognition



Magical Battles

Experience magical battles



Tech Stack

Built using Unity, Wit.AI and Sentis+ML model



Unleash the Game's Spell Arsenal

Protego

A Shield Charm used to protect the caster from incoming spells or physical attacks



Bombardo

Creating magical explosions at targeted locations



Stupefy

Stunning opponents with precision casting



Expecto Patronum

Conjuring protective magical barriers



Technical Innovation

1 Gesture Recognition

Advanced pattern matching for wand movements

2 Voice Integration

Wit.ai processing for spell incantations

3 Visual Effects

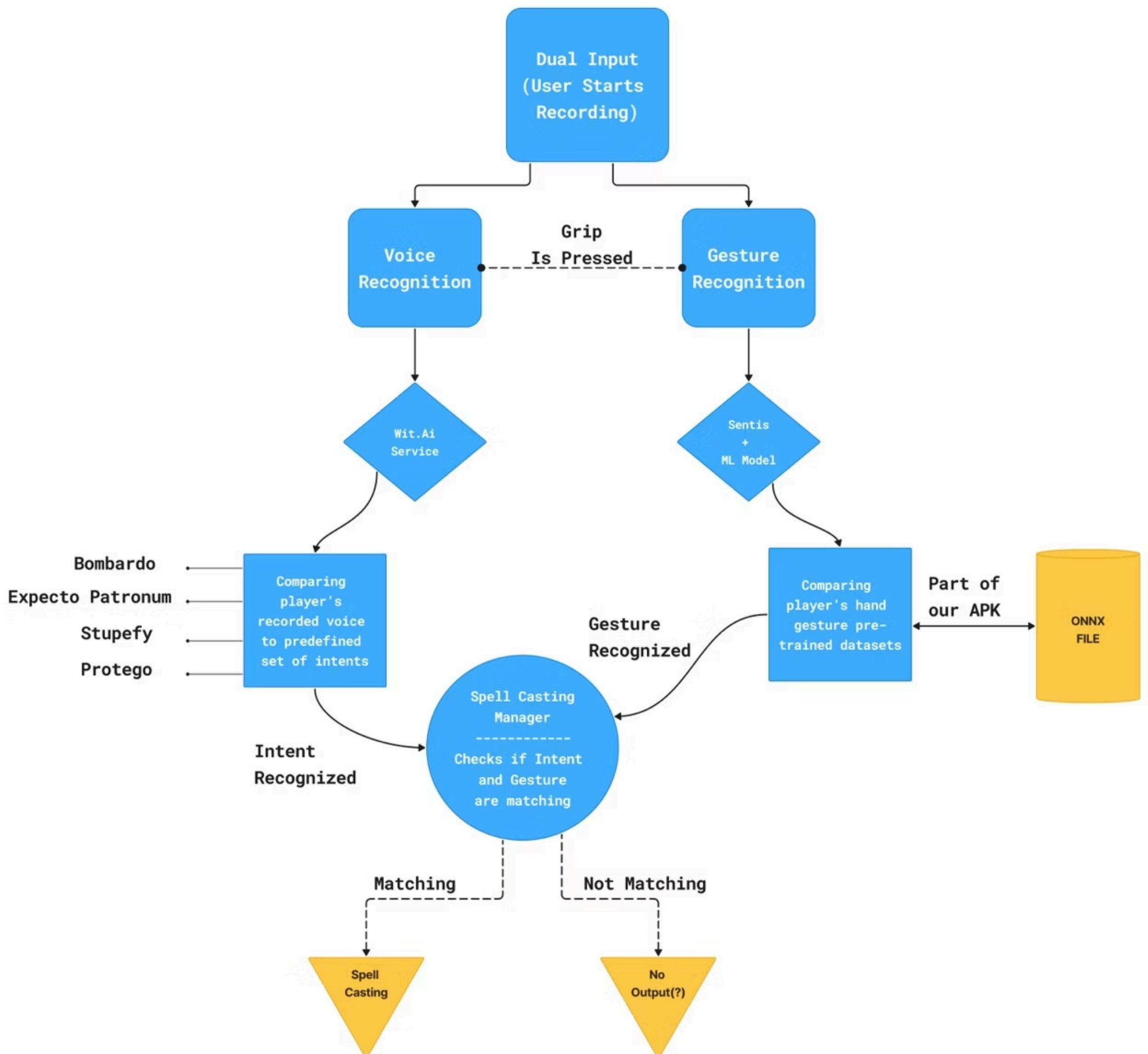
Real-time spell trails and particle systems

4 Physics System

Dynamic interactions between spells and environment



Spell Casting Mechanism



User Experience

Intuitive Controls

Natural wand movements tracked with precision

Voice commands feel authentically magical

Regular spell that the user can cast - easy to cast using the Trigger button



Sensory Feedback

Colorful spell trails follow wand movements

Spatial audio for immersive spell effects

Haptic feedback enhances spell casting

Development Challenges

Input Synchronization

Aligning voice and gesture commands



Game Performance

Optimizing both gameplay and visuals



Recognition Accuracy

Improving both hand gesture and voice recognition



Unity's Learning Curve

Mastering Unity's environment



Time for Demo and Q&A





Future Enhancements



Expanded Spellbook

More spells and magical abilities



Enhanced Visuals

Next-gen spell effects and environments



New Locations

Iconic wizarding world environments