

Karachi Institute of Economics and Technology
College of Computing and Information Sciences
FINAL YEAR PROJECT – 2023
PROPOSAL

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|------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|----------------------------|
| SEMESTER | FALL 2023 | YEAR | 2023-2024 |
| TITLE OF PROPOSED PROJECT | | | |
| Virtual Talk Universe | | | |
| Project Category (choose one) | | <input checked="" type="checkbox"/> Product based <input type="checkbox"/> Research-based | |
| SUPERVISOR INFORMATION (To be filled by the office) | | | |
| Supervisor Name: | | Organization/Designation | |
| Contact No: | | email: | |
| STUDENT(S) INFORMATION | | | |
| S# | Student ID | Name | |
| 1 | 11255 | ABDULLAH JAWED | |
| Contact No: | 03401243614 | email: | abdullahjawed900@gmail.com |
| Expertise | React js, node js, mongo db, React native, ASP.NET | | |
| 2 | 12359 | Maham Farooq | |
| Contact No: | 03343124974 | email: | manofarooq475@gmail.com |
| Expertise | Python, c#, react js, react native, MySQL | | |
| 3 | 12398 | Manahil Leghari | |
| Contact No: | 03337451687 | email: | legharimanahil@gmail.com |
| Expertise | c#, react js, Node js, SQL server, python | | |
| 4 | 10974 | Madyha Siddiqui | |
| Contact No: | 03350257659 | email: | madyhasiddiqui12@gmail.com |
| Expertise | Python, c#, react js, react native, MySQL | | |
| PROJECT AREA/TOOLS | | | |
| Tools Required: | ReactJS/NodeJS/WebGL/Blender/Unity/python, Text-to-Speech(TTS), NLP Libraries (e.g., NLTK, API) | | |
| Area/Specialization: | ML/AI/Virtual Reality/Webapp | | |
| SUMMARY OF PROPOSED PROJECT (MAXIMUM 400 WORDS) | | | |

Problem Statement:- Loneliness is a common problem harming mental health. We're creating an AI virtual companion to provide company, emotional support, and uplifting conversations to combat loneliness and boost well-being.

Project Description:- The project's core objective is to craft an interactive and captivating user experience through the seamless fusion of a Virtual character. It enables users to engage in natural language conversations with this Virtual character, significantly amplifying user engagement and interactivity within driven games and applications.

- **Key Features(Current & Phase 2):** The project encompasses a suite of critical attributes to deliver a rich user experience:
- **Real-Time Natural Language Chats:** Users enjoy real-time, human-like conversations with the Virtual character.
- **3D Character Realism:** The character comes alive with 3D animations and expressions, elevating the conversational realism.
- **User Input Handling:** It adeptly manages user input, including text and even optional voice commands.
- **Natural Language Processing (NLP):** Equipped with NLP capabilities, its tailors' responses with context awareness.
- **Voice Recognition and Synthesis:** Optional voice recognition and speech synthesis enrich the interaction (Phase 1).
- **Global Accessibility:** Phase 2 introduces multi-language support and translation for a global reach.
- **Contextual Hints:** Also in Phase 2, contextual hints offer users guidance, simplifying their interaction.

This project aspires to cater to diverse applications, from immersive entertainment experiences to educational tools and beyond. It promises a holistic and engaging encounter, fostering a deeper connection between users and digital environments.

PROJECTOBJECTIVE(S)/OUTCOMES

Purpose:-

To use AI to help people feel less lonely and happier through friendly virtual companionship.

Enhanced User Engagement:-

The project can be designed to create engaging and immersive user experiences with in entertainment. Users can interact with virtual characters in a natural and conversational manner, increasing their engagement and enjoyment of the game.

| SIMILARAPPLICATIONS(SIMILARITY/DISSIMILARITY) | | | | |
|-----------------------------------------------|-------------|----------------------|------------------|--------------|
| S# | Name of App | Link(URL/Play Store) | Similar Features | New Features |
| 1 | Unique idea | | | |
| 2 | | | | |
| 3 | | | | |

FUNCTIONAL FEATURES(Must be in Bullet Form)

For FYP 1(At Least 70% of FYP):

- Login Form
- Firebaseintegratin
- Google integration
- Concept Design (Define character)
- AI Characterdesign
- 3D Modeling
- Animation(Expression)
- User Interaction
- User Interface (UI)

FYP Report at the time of FYP1 declaration(Soft Copy)

- Chapter1:Introduction
- Chapter2:LiteratureReview/Process Review
- Chapter3:AnalysisDiagrams

ForFYP2:

- Character Customization
- Character's Response(Joke style, normal style)
- Face expression
- Joke Api
- Text-to-Speech

FYP Report at the time of FYP2 declaration(Hard Copy)

- Complete FYP Report
- Panaflex (2x5ft.)

Additional Features by Jury Members:

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| For Proposal Defense Purpose |
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| PROPOSED ADVISORY COMMITTEE | | |
|-----------------------------|--------------|-----------|
| S# | Faculty Name | Signature |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |

| FYP COMMITTEE | | | |
|---------------|------------------------------------------------------------------|-----------------|------------|
| S# | Member(s) Name | Designation | Signature |
| 1 | Usman Khan (FYP Head) | Asst. Professor | |
| 2 | Dr. Salman Ahmed Khan / Dr. Noman Islam (Head of the Department) | Professor | |
| 3 | Dr. Muhammad Khalid Khan (Associate Dean & Director CoCIS) | Professor | |
| | | Date | 00/00/0000 |