**FYP Proposal Submission Form – FA’22 & onwards**

# Project Title:

Voice canvas (An AI-Powered Image Generation tool through Voice Commands).

(150 characters)

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# Which real world problem shall be solved by this FYP?

Voice Canvas addresses accessibility issues by enabling visually impaired users to describe their surroundings and receive generated images based on their descriptions. It also helps artists, designers, and entertainment industries by translating voice input into creative images, allowing non-artistic users to create visuals without technical skills

(800 characters)

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**2:** CIIT/FA21-BSE-020/WAH Shafia bibi

**Detail of Project Members:**

Dr. Faisal Shaffique Butt

**Supervised By:**

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**Project Streams:**

Web-based FYPs Desktop Applications

Mobile Apps FYPs Game-based FYPs

Hardware-based

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# Project Description:

(3000 characters)

**Note:** Login/logout and authentication/authorization shall be the default functionalities of Web/Gaming/Mobile/Desktop FYPs.

1. **What is the overall working/summary of this FYP?** (1000 characters)

VoiceCanvas is a mobile and web application that uses advanced speech recognition and AI to convert spoken input into images. The system takes voice commands, applies emotion detection and contextual NLP analysis, and generates images based on the user's voice description. This technology has applications in accessibility for the visually impaired, the entertainment industry, and artistic design.

# Write name and detail of each module in your FYP.

1. **Voice to Text Conversion:** Converts spoken audio into text using speech recognition technology.

2. **Text to Image Generation:** Uses machine learning and computer vision to generate images from text descriptions.  
3. **Style Transfer:** Allows users to apply artistic styles to the generated images, such as watercolor, 3D, or abstract.

4. **Object Detection for the Visually Impaired**: Enables the system to describe and detect objects from user input to assist visually impaired users.

5. **User Dashboard:** Provides an interface for project management, feedback, and settings customization.

6. **Changes on Selected Areas:** Digital image processing enables modifications to specific areas of the image as per user selection.

# Member-wise Module Information

1: Which module shall be developed by student-1?

(500 characters)

1. Voice to Text Conversion
2. User dashboard.
3. Changes on selected areas.

2: Which module shall be developed by student-2?

(500 characters)

1. *style transfer*
2. *Text to image generation*
3. Object Detection for the Visually Impaired

# Were similar FYPs already developed on the same topic in your department?

Yes No

# (d-1) Copy name(s) of latest one or two similar FYPs from RMS student console and paste below. (150 characters)

Voxie poxie

**(d-2) Mention below the three (3) new, but main, functionalities you are adding to this FYP.** (600 characters)

1. Changes on selected areas.

2. style transfer

3. object dection for visually imparied

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# Development Environment:

Select tools, DBMS and platform as per above stream that you have chosen.

Tool(s) : flutter, android studio ,python ,matlab

DBMS : SQLite, firebase

Platform :andriod

* **Tools** (e.g.Dot Net platform, Android Studio,
* Xcode, Swift, Ionic, Xamarin, PhpStorm
* /Php Laravel, WordPress, Maya, Unity 3D,
* Photoshop, MATLAB, ns-2, Python,
* Java EE, Java ME, NetBeans, Java Script,
* Node.js, Angular.js, JSON, OpenCV)
* **DBMS** (e.g. SQL Server, MySQL, SQLite,
* Oracle, Teradata)
* **Platform** (e.g. Windows, Linux

# Evaluation Criteria for 7th Semester:

(Week 14 - 16)

1. SRDS (Functional & Non-functional requirements, Use case diagram, Sequence diagram, Class diagram, Entity relationship diagram / Detailed hardware configuration)
2. Implementation of ONE major use case (>=30% FYP work), which does not include login/logout.
3. Interface with complete functionality of major use case / In case of hardware, provide configuration of major use case functionality.

# Evaluation Criteria for Internal 8th Viva:

(Week 12 & 13)

* 1. Implementation of all use cases (>=90% FYP work)
  2. Project in running and working form as per Use case, Class and Sequence diagrams as mentioned in SRDS
  3. Initial FYP report
  4. Deployment
     + Web: Your website must be online on any free/paid hosting service
     + Mobile App: Your app must be in APK/iOS form so that it can be installed
     + Gamimg: Your game must be in executable form so that it can be installed
     + Desktop Application: Your application must be in executable form so that it can be installed
     + Hardware: Your final product must be in proper casing and should give look and feel of sellable item