

# Project Proposal

## Project description:

UI designer is an app that creates user interface by drag and drop function. It utilizes the widgets library for user to drag and drop.

## Competitive analysis:

Most of the apps for creating user interfaces like figma, sketch requires expertise in User Interface design. I wish to democratize UI design by creating UI designer, an app that creates beautiful UI simply with drag and drop function. It utilizes Widget library, and has preset components like radio button, button, textbox, and so on, you can create simple UI with these, just like using bootstrap, you can create ideal webpage by writing simple html code.

However, unlike bootstrap, UI designer do not require user to write code. Like PyQt, it's based on GUI.

## Structural Plan:

Scene0 for project documentation and intro page. Like, "prev design" for previous UIs user created, "start design" for start designing the UI. "help" to see the documentation.

In the main scene, the user creates the app by drag and drop.

After hitting the "bake UI" button, the user could see the final effect of user interface when baked onto the real scenario.

## Algorithmic Plan:

1. Storing the prev design function: by creating a library to store the prev designs
2. The back and force button using recursion and backtracing
- 3.(undecided algorithm yet) aligning each component to the nearest 10 px point, meaning each component should snap to the invisible grid.
4. Color palette function: a. Writing the color palette myself instead of using a pic  
b. After user picks one color, it generates two rest color using algorithms and apply to the whole app

## Timeline Plan:

TP0: for writing the simple framework

TP0- TP1: mainly for the design

TP1- TP2: for achieving the main algorithms

TP2- TP3: for the rest parts, and see if I can add open CV for drag and drop function(detecting user hands)

## Version control plan:

github upload every 3 days

## Storyboard:

