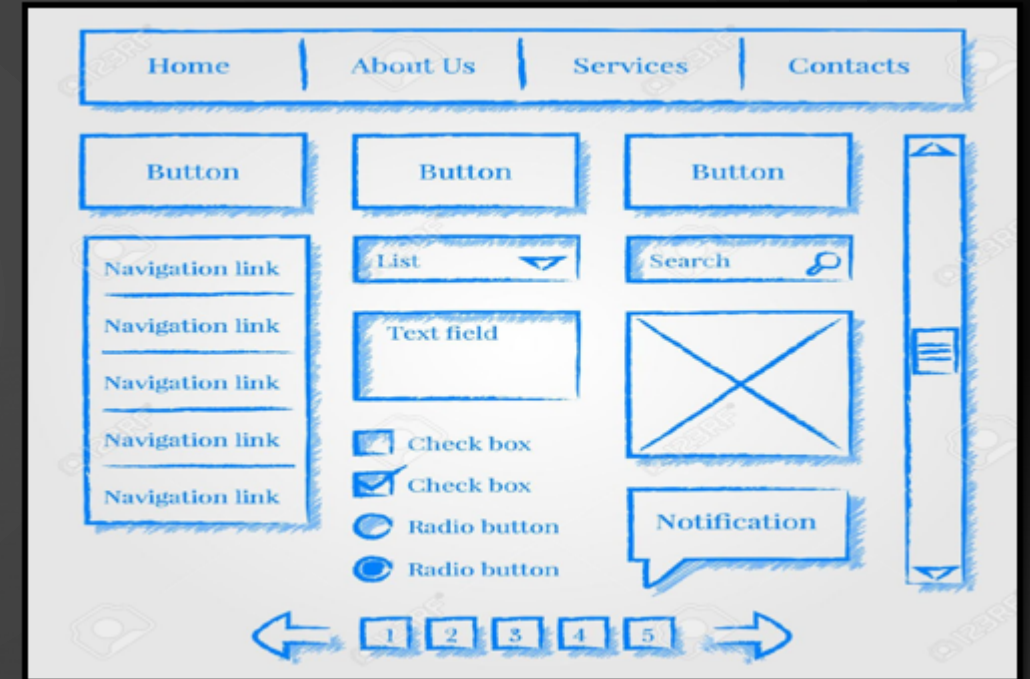


SKETCH-BASED WIREFRAMING

SAVINAY NARENDRA & KRISHNA G

INTRODUCTION

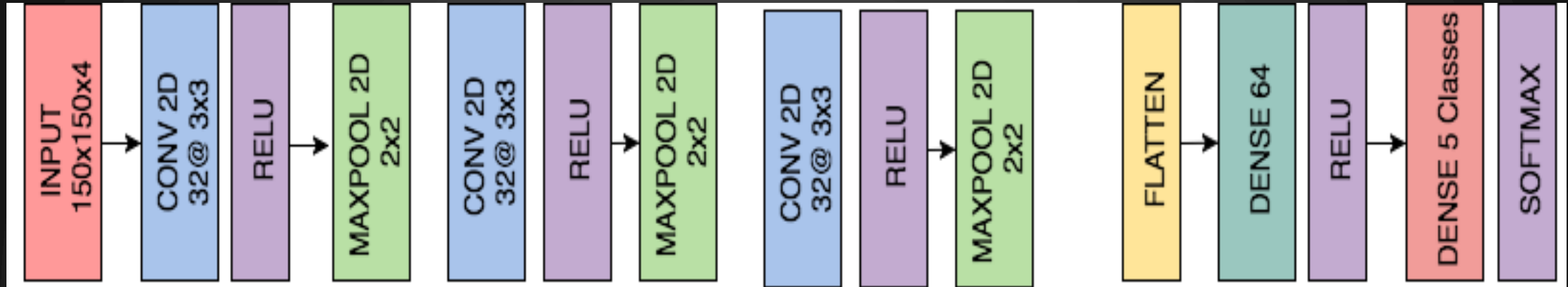
- Professional designers draw rough sketches, called wireframes, for UI layout
- Speed is key in effective wireframing while still giving the designer the ability to explore layout possibilities
- There are some limitations to the current existing systems
 - They use drag and drop
 - restrictive and uneasy for people who are used to sketching
- Create system for electronically sketching websites, opportunity to evaluate live design.



LITERATURE REVIEW

- SILK: Designer sketches on interface using a set of components & gestures, recognize them and notify what it believes user has drawn. [Landay 1996]
- On-line Scribble Recognizer: fast, simple and compact approach to recognize scribbles drawn with a stylus on a digitizing tablet. [Landay, 1995]
- CALI: identify shapes of different sizes and rotated at arbitrary angles, drawn with dashed, continuous strokes or overlapping lines. [Fonseca 2002]
- FreeStyle (A Sketch based wire-framing tool) – Identified convex hull of the sketches drawn and identified sketches based on the ratio of convex hull and bounding box. [Narendra et al, CPTTE, 2017]
- No current web-based sketch wireframe tool

PROPOSED SOLUTION



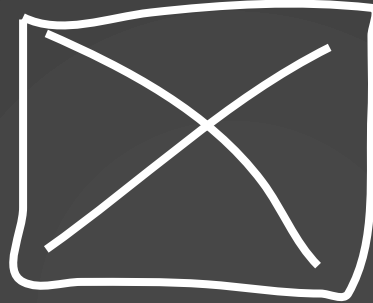
- Recognize basic html elements from a wireframe sketch and develop a simple website
- Collect Data from users and store them as Images.
- Use the images to train the network and use it for classification.
- Regularization : Dropout rate of 0.5

DATA DESCRIPTION

video element



image element



button element



navigation bar element



drop-down menu element

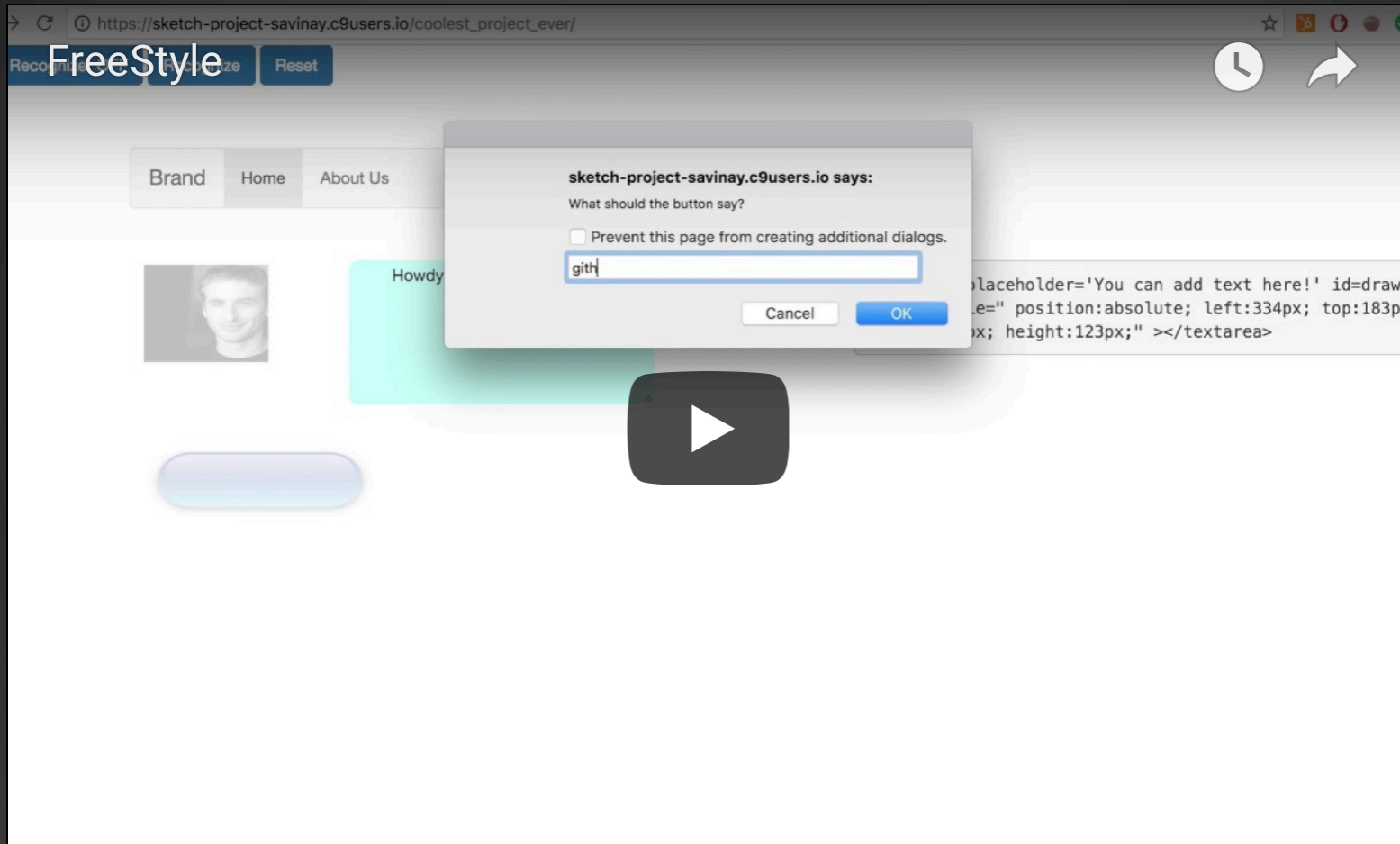


- Data was collected from students of TAMU
- Sketches drawn were converted into images
- Images resized to 150 x150

RESULTS AND DISCUSSION

- Model is trained on 143 images. 100 epochs
 - Training - 114 images
 - Testing data - 29 images
- 5-fold Cross Validation Accuracy: 72.06%
 - Very less Data
 - Less Variation
- Weren't able to do User Testing
- Enables non-techies to build their personal websites effortlessly
- Future: Get more data, use more elements, Real Time response

DEMO



The background of the slide features a series of concentric circles in shades of dark gray, centered on the left side. The bottom of the slide is a horizontal band with a wood plank texture.

- **THANK YOU. QUESTIONS?**