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JIAOCHEN
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OUTLINE

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All the background pictures in the portfolio are captured by myself!



ABOUT ME

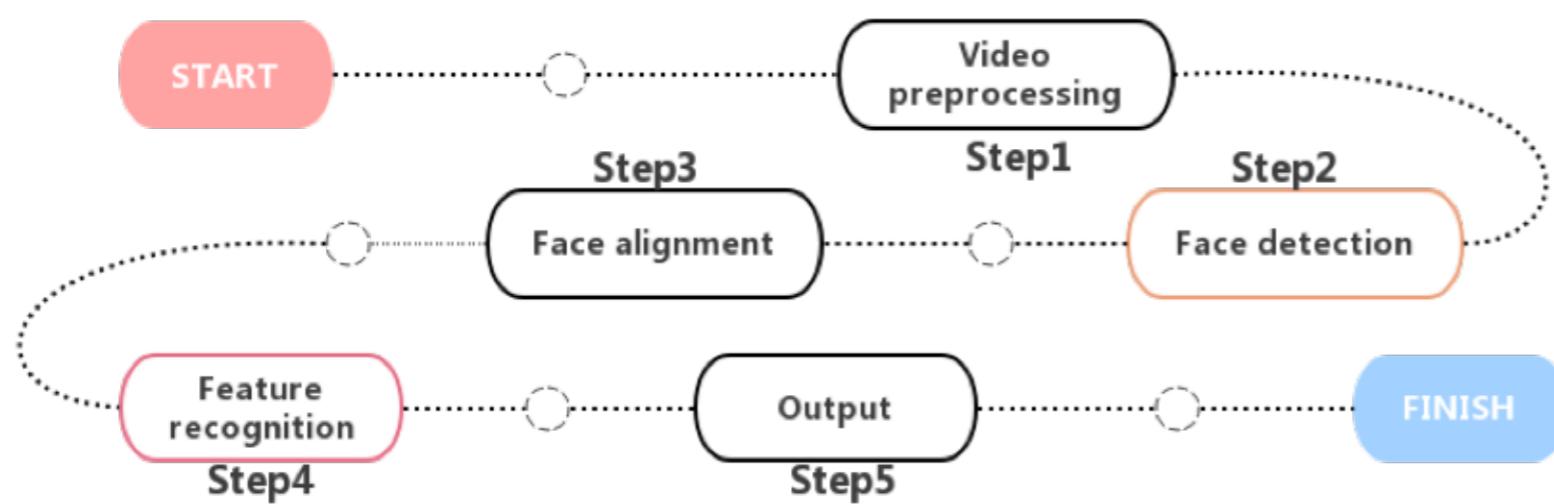
I am **Jiachen Li** from Beijing University of Posts and Telecommunications (**BUPT**), majoring in Electronic Information Science and Technology (**EE**). I am interested in **HCI**. Besides, I love **photography**, sketching and drawing, travelling and my cat Jacob.

1

Kinship Verification On Familyship Face Videos

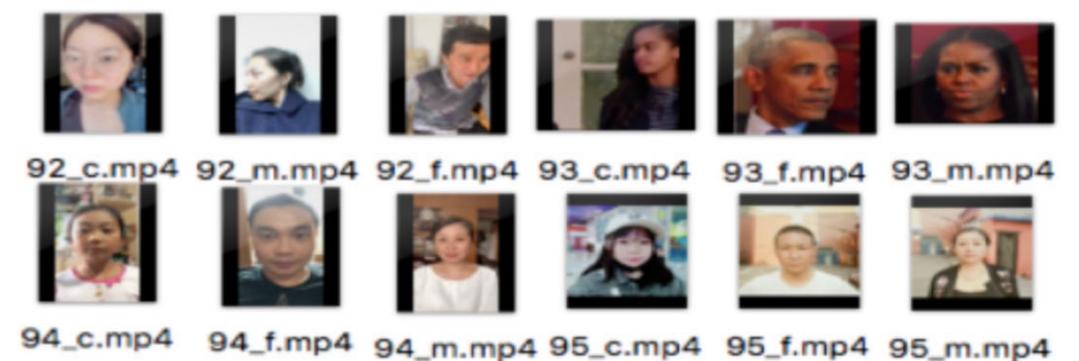


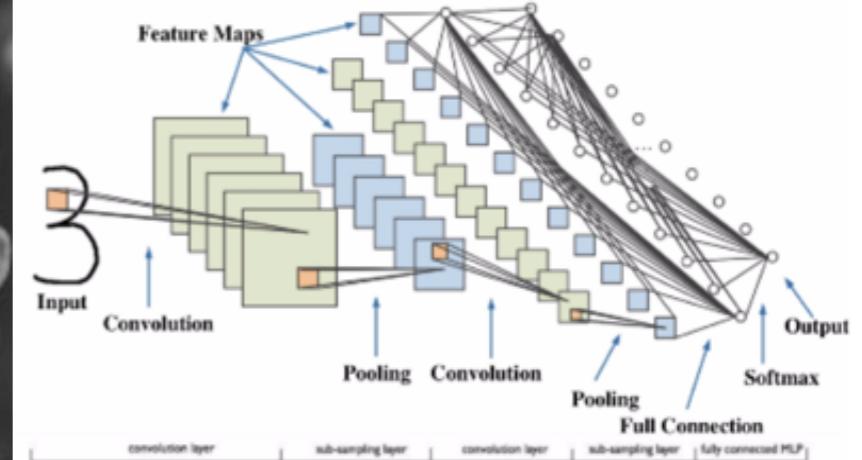
A method to perform **kinship verification** between 3 members of a family based on short **video** clips via **face recognition**.



Proposed an advanced process of face recognition for blood relationship, including extracting key frame, face detection, face alignment and feature recognition using CNN

FFVW (Familyship Face Videos in the Wild): a novel video-based face recognition database with blood relationship labels; parsed video data by family of father, mother and children from raw data with tree-structure





Behaved well in dim light

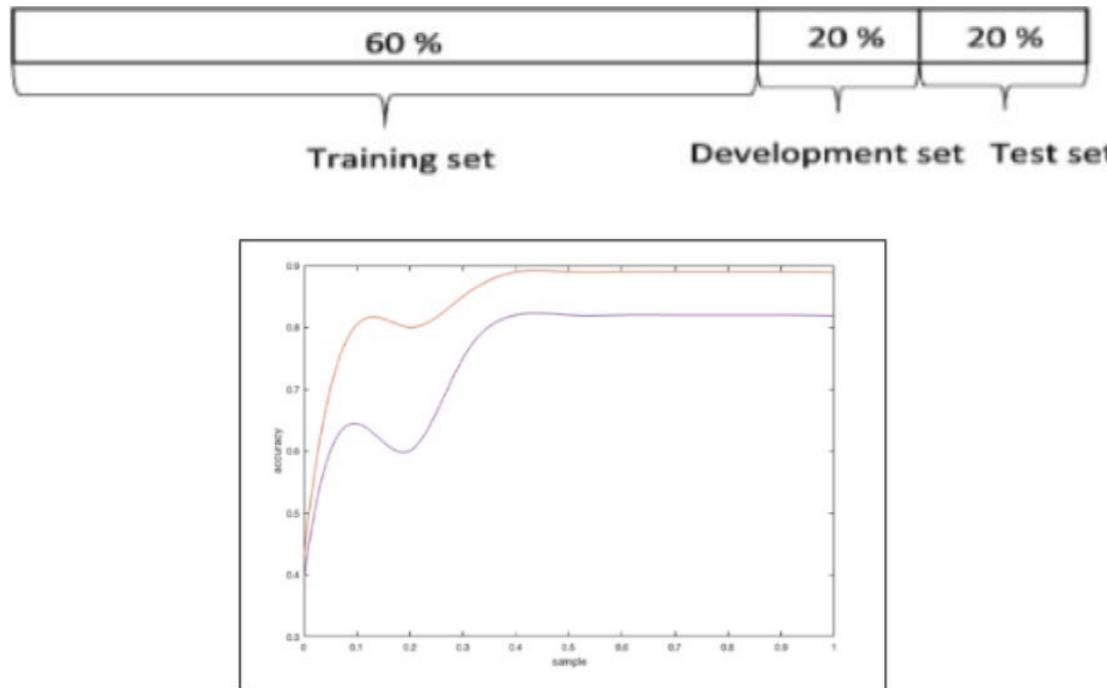


Fig. 10. ROC curve for FFVV with (blue) and without (red) normalizing the brightness of the input images.

83.06% to **89.42%**

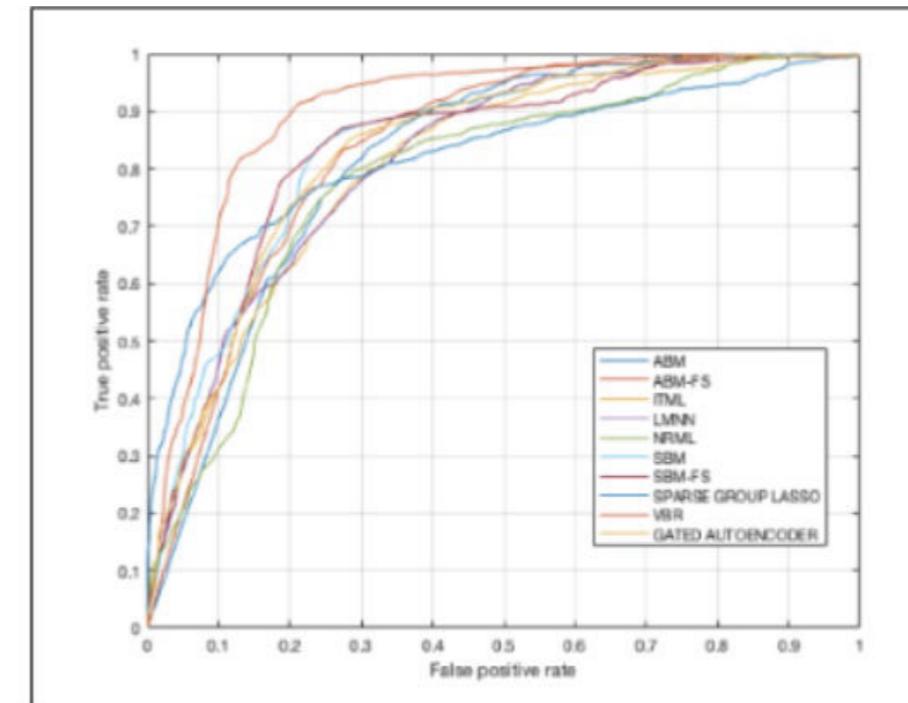
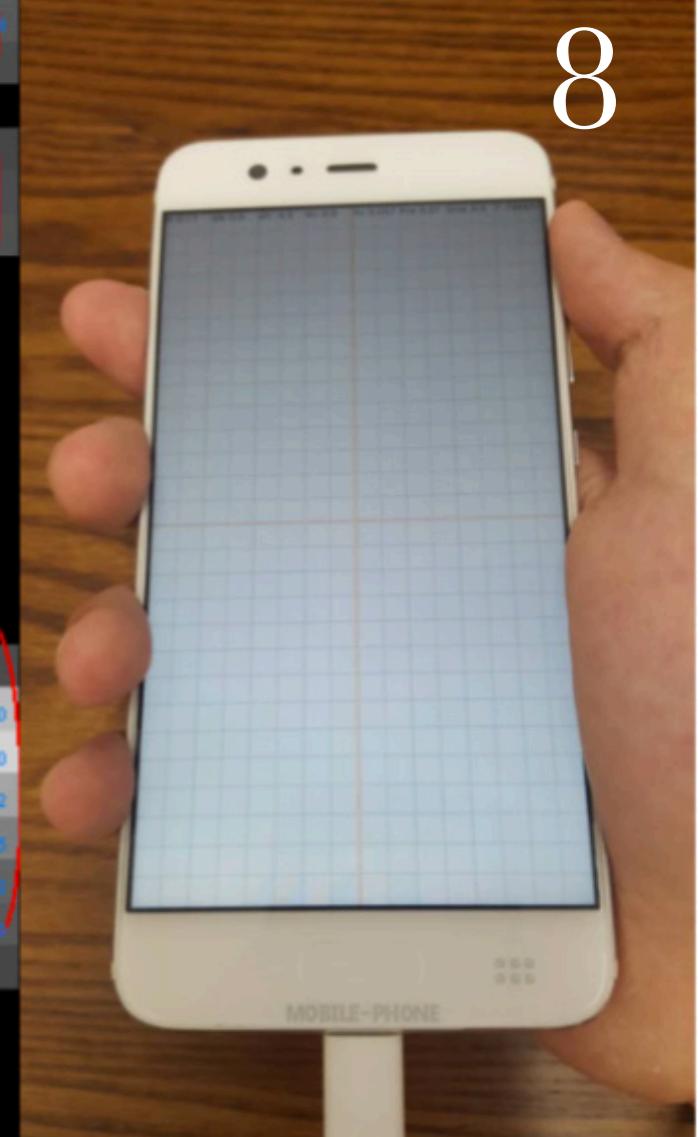
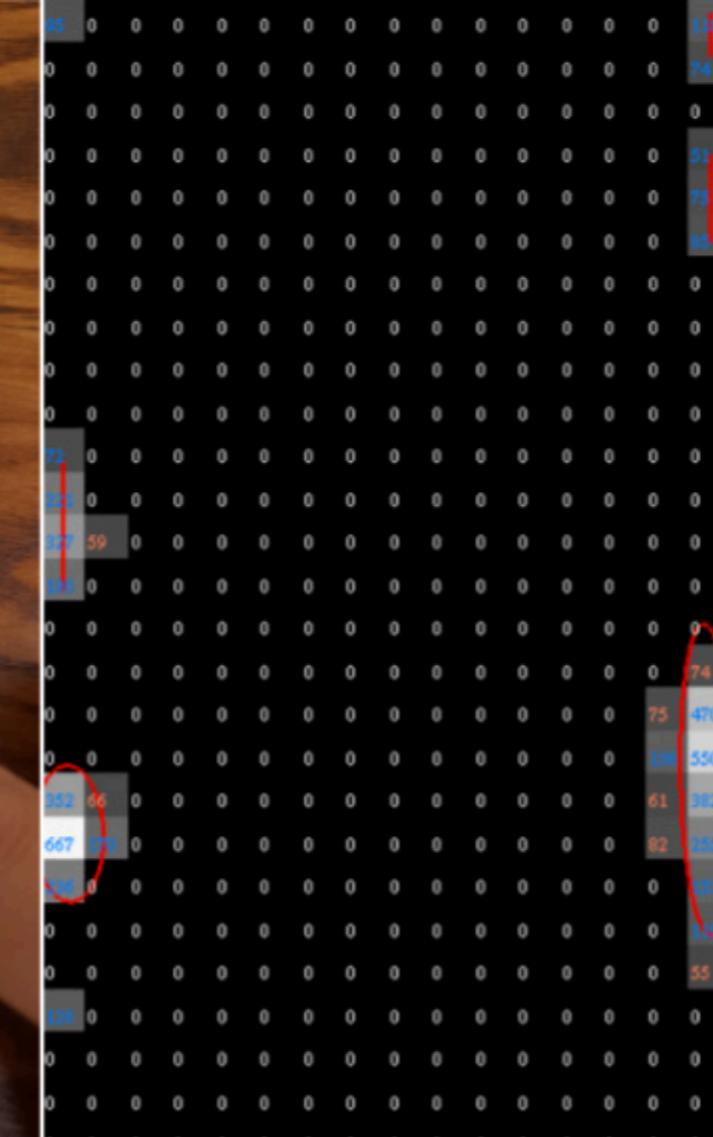
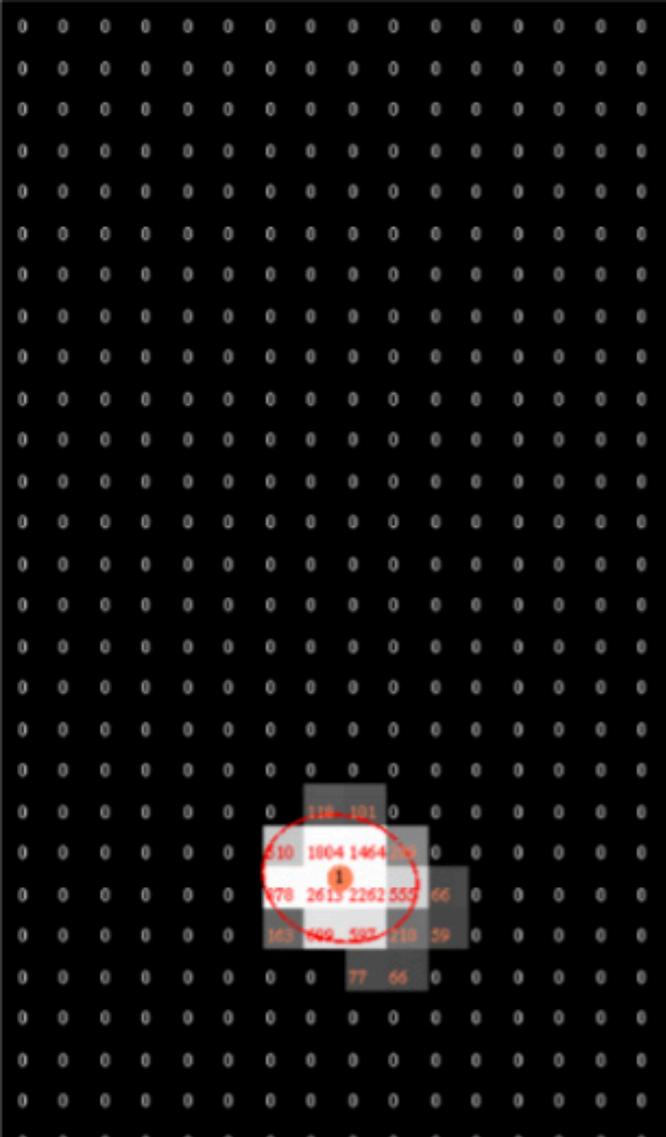


Fig. 11. ROC curve comparison of our approach to current methods.

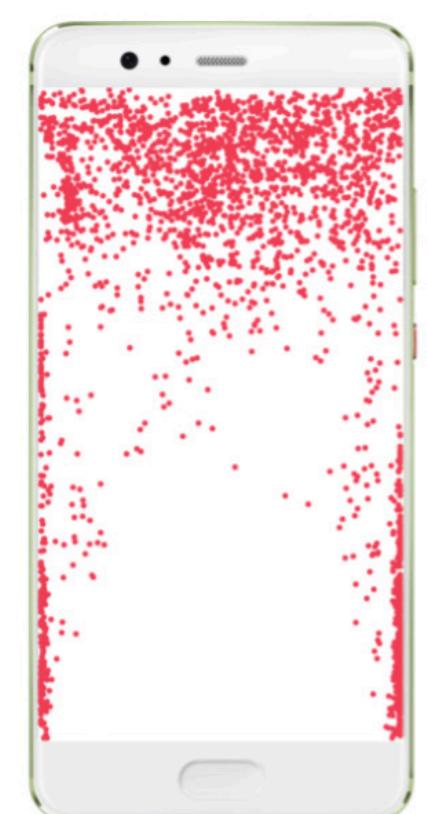
2

Heterotypic Unintentional Touch Detection

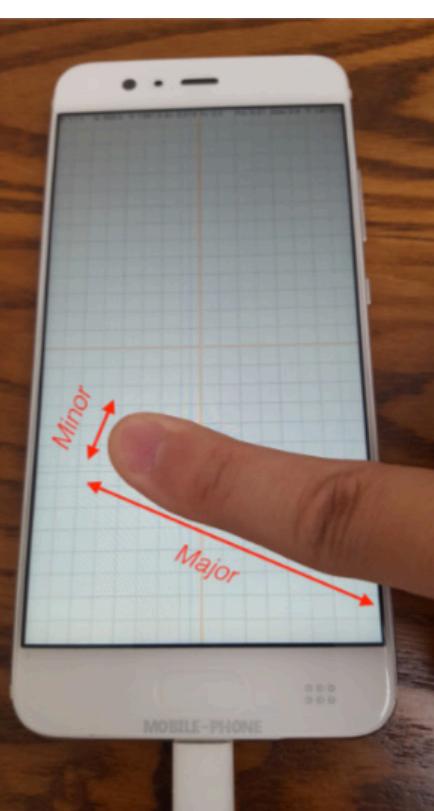
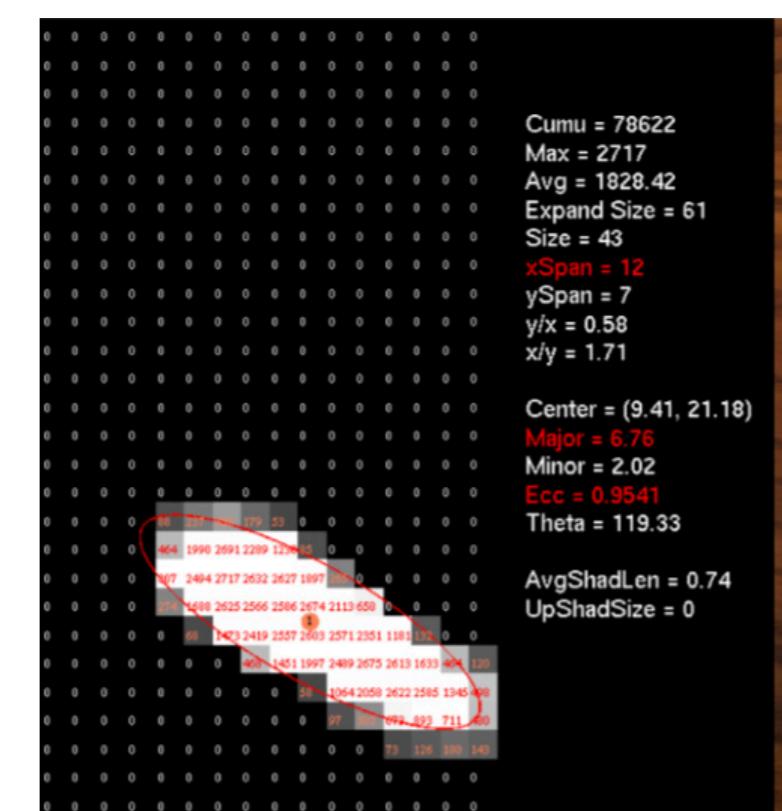


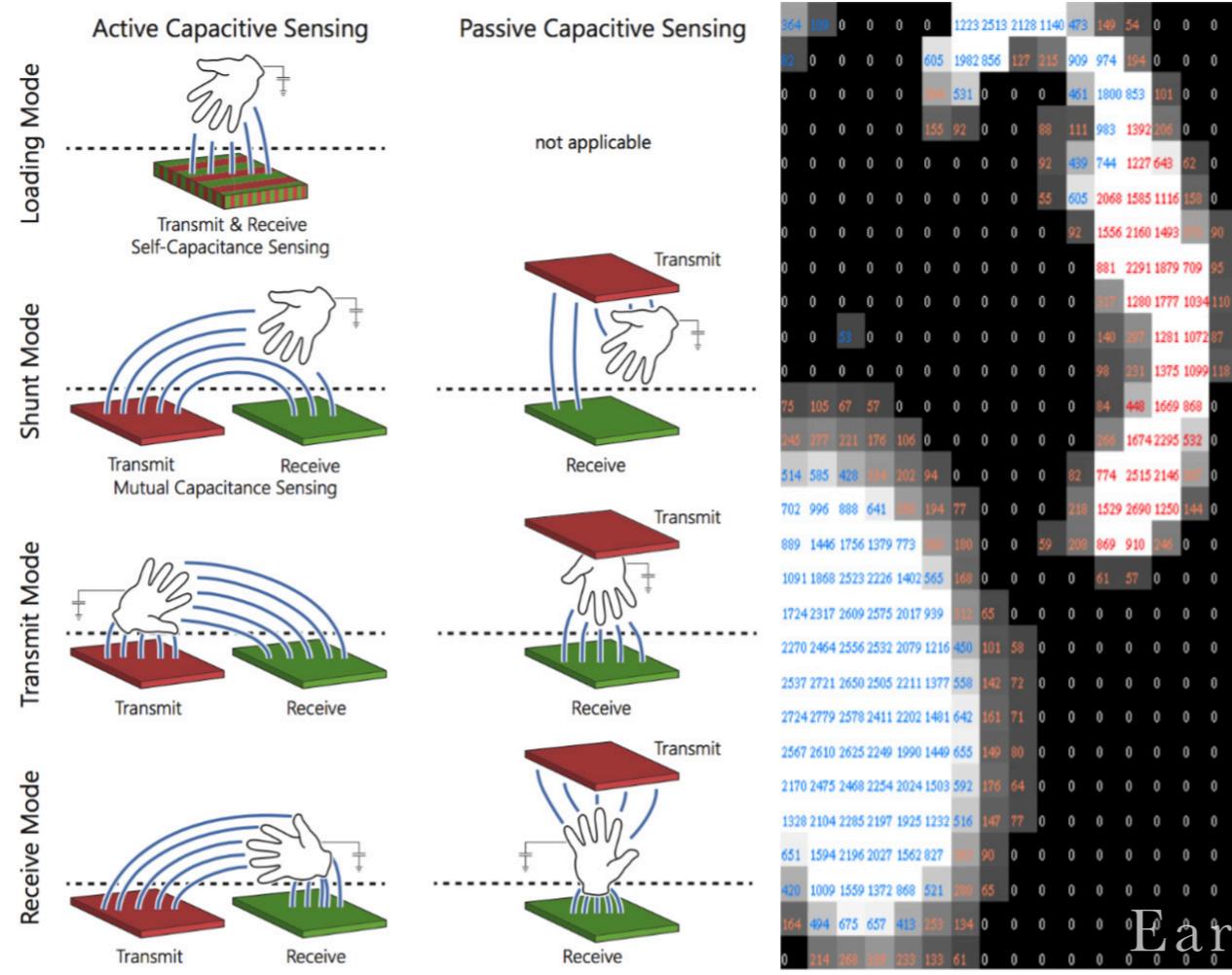


Touch & Edge Touch



Distribution of record points

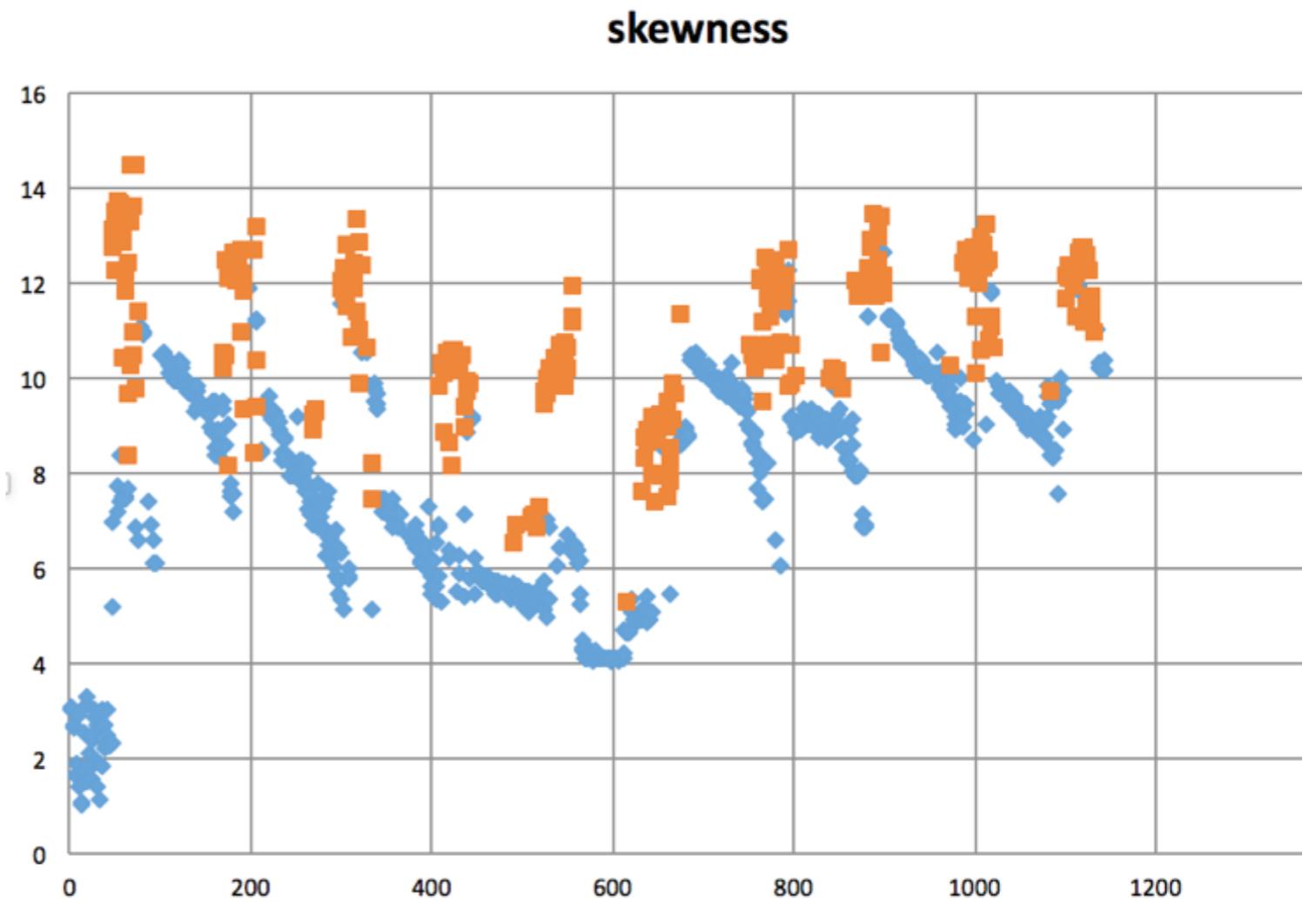




Extracted temporal sequences of the max-capacitive point in every core area; performed FFT analysis and generated the frequency spectrum; discovered disparity of spectrum distribution for intentional and unintentional touches.

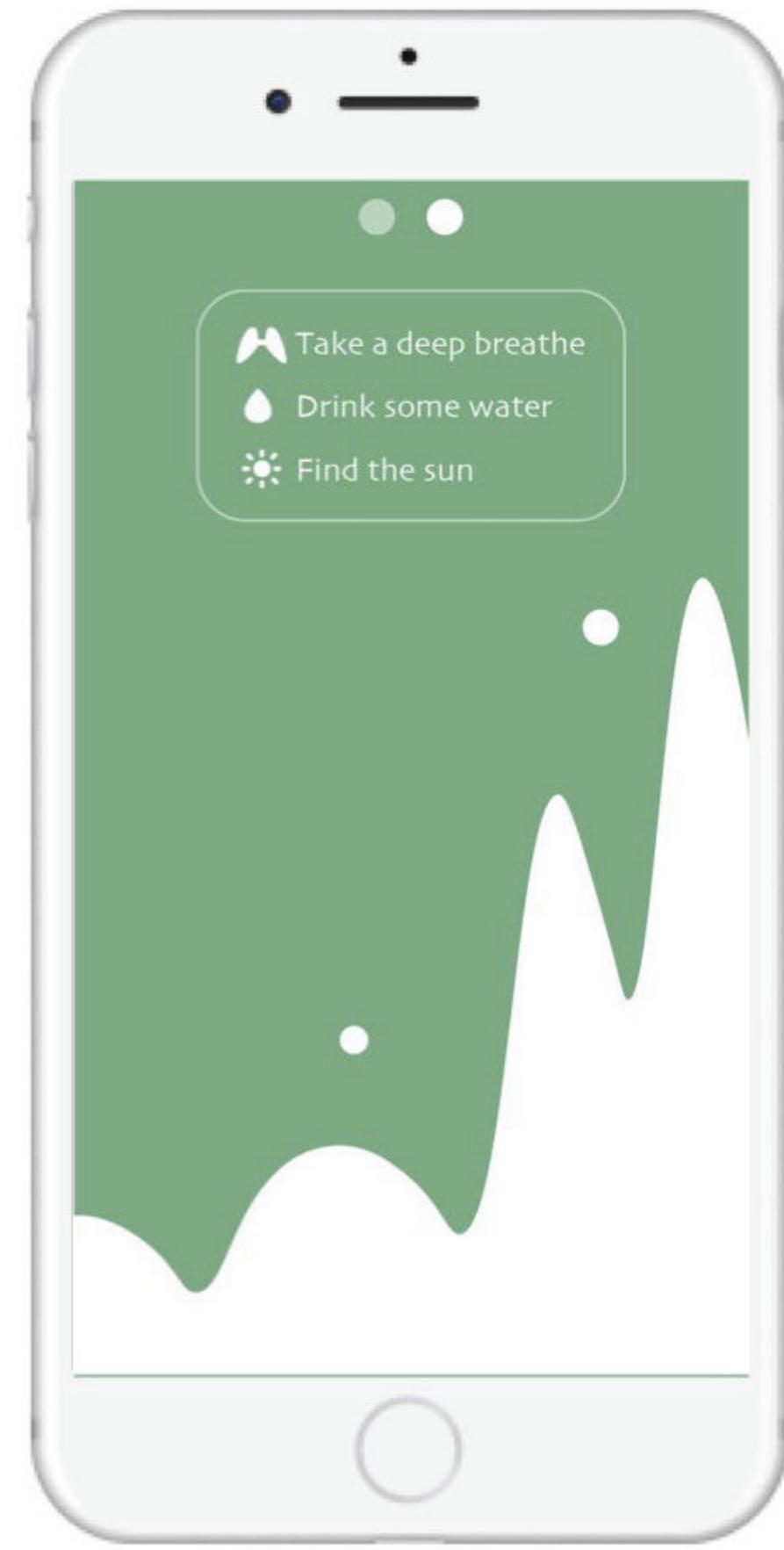
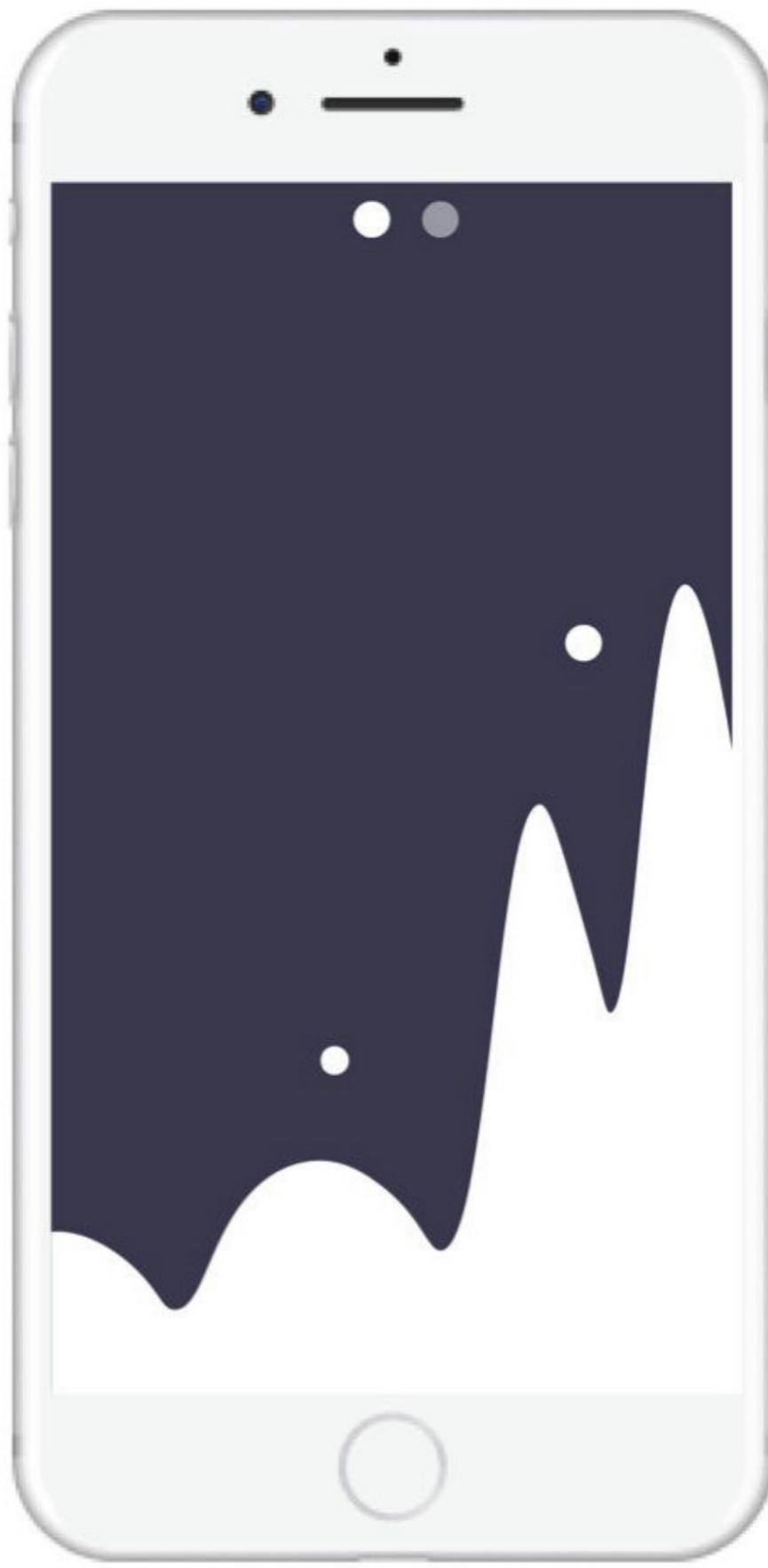
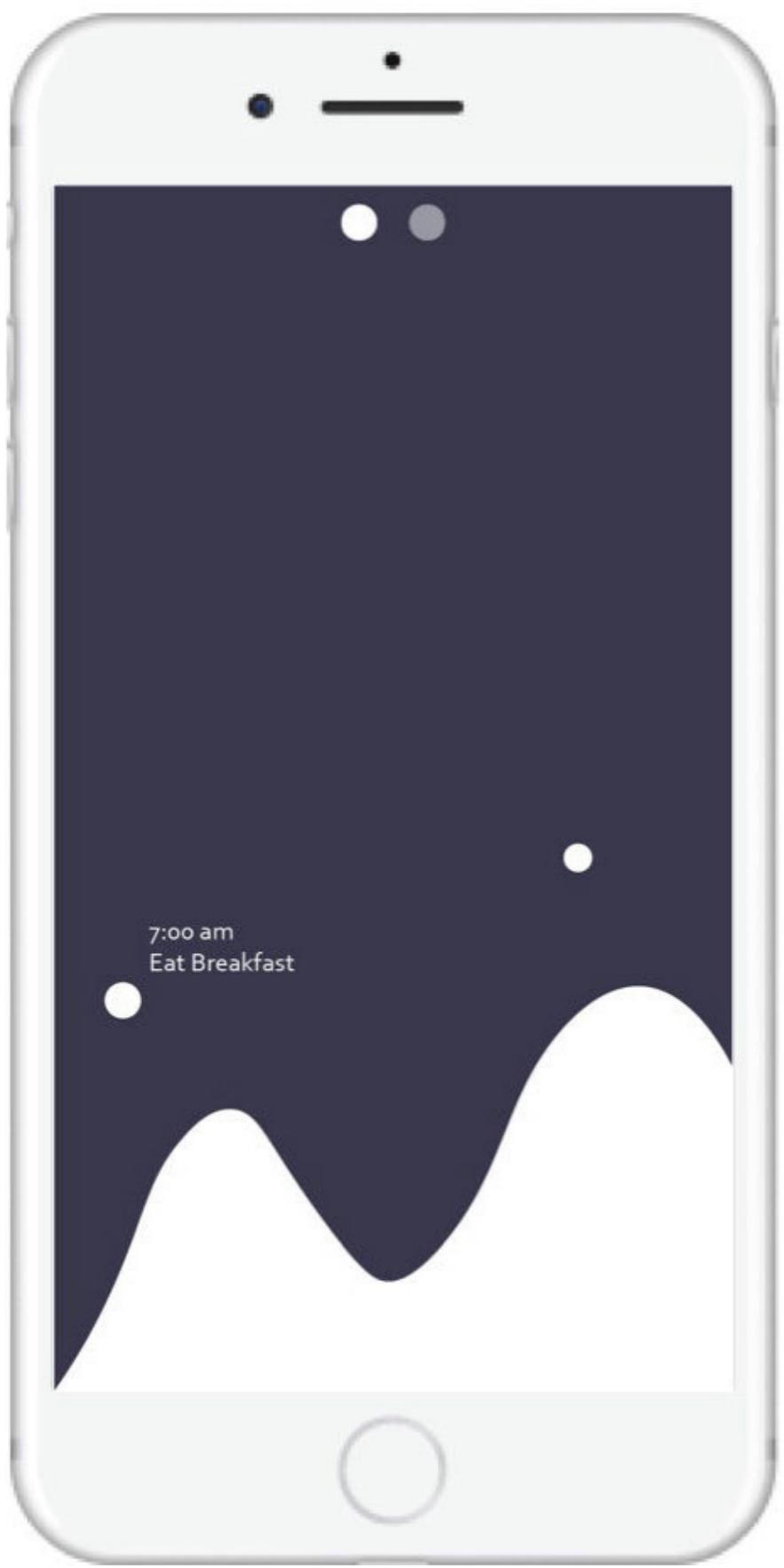
Designed unintentional touch detection algorithm based on 125Hz capacitive sensing signal on phone.

Used flood-fill algorithm and ellipse fitting techniques to detect touch, and recorded touch count and area.

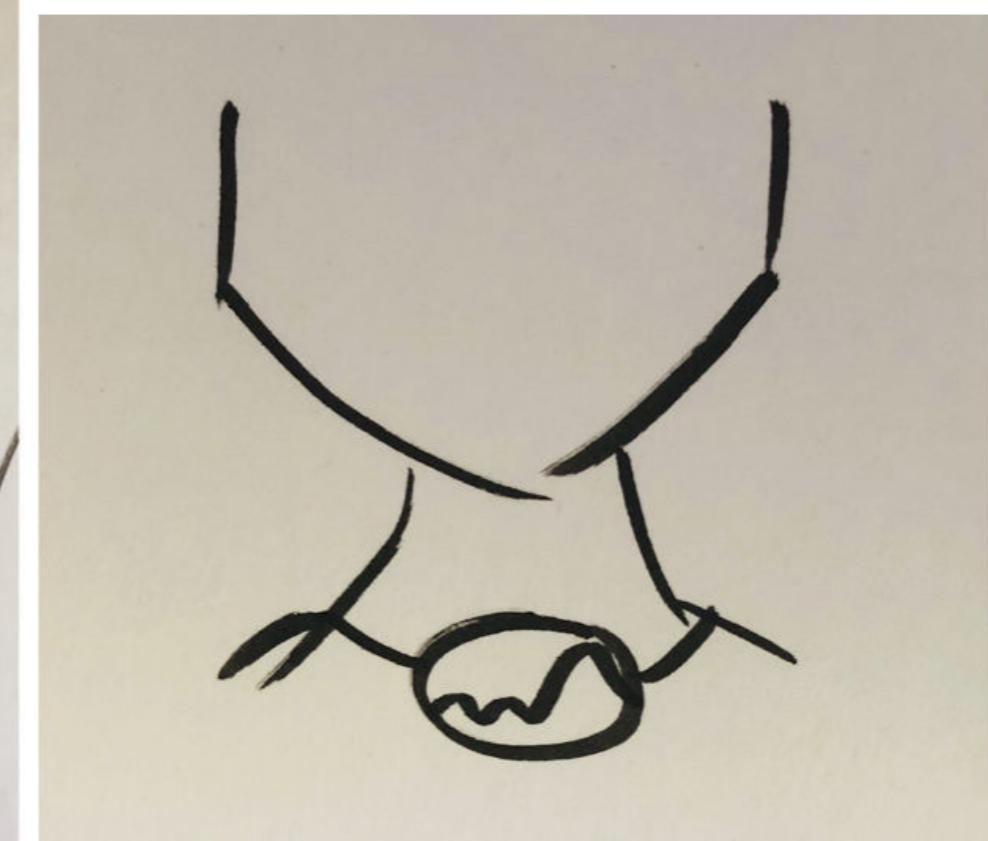
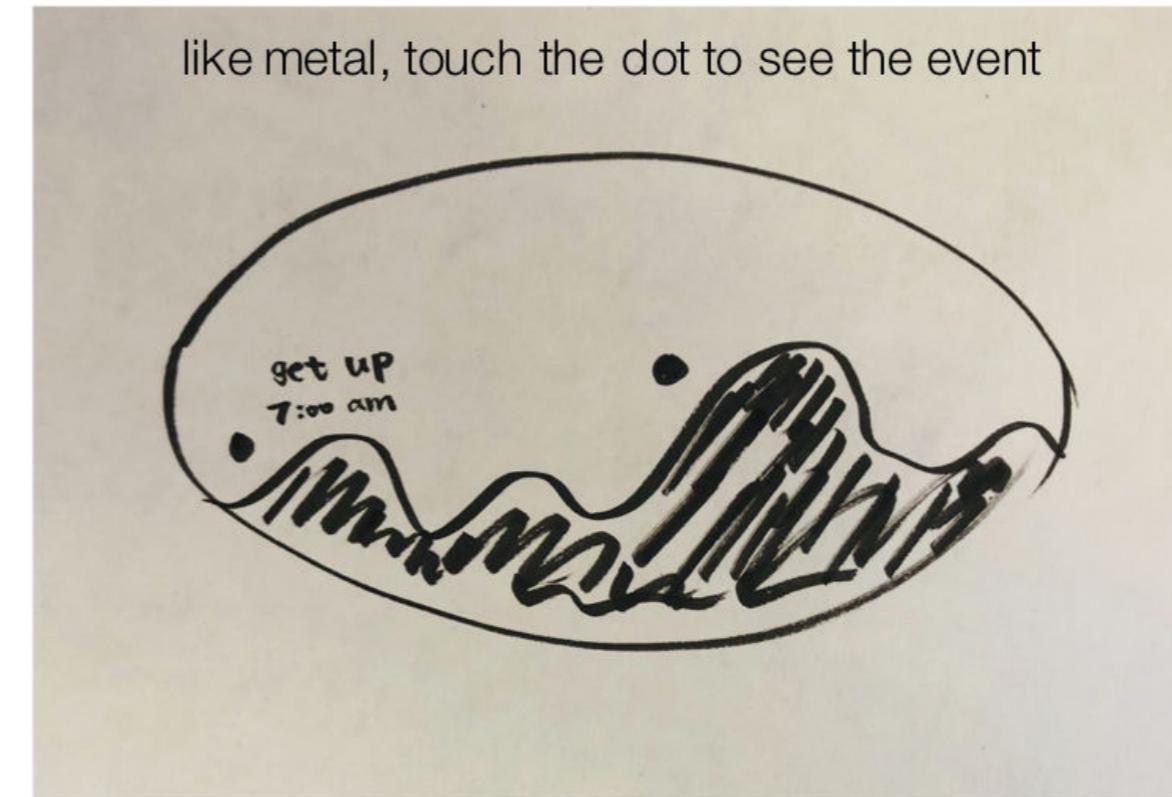


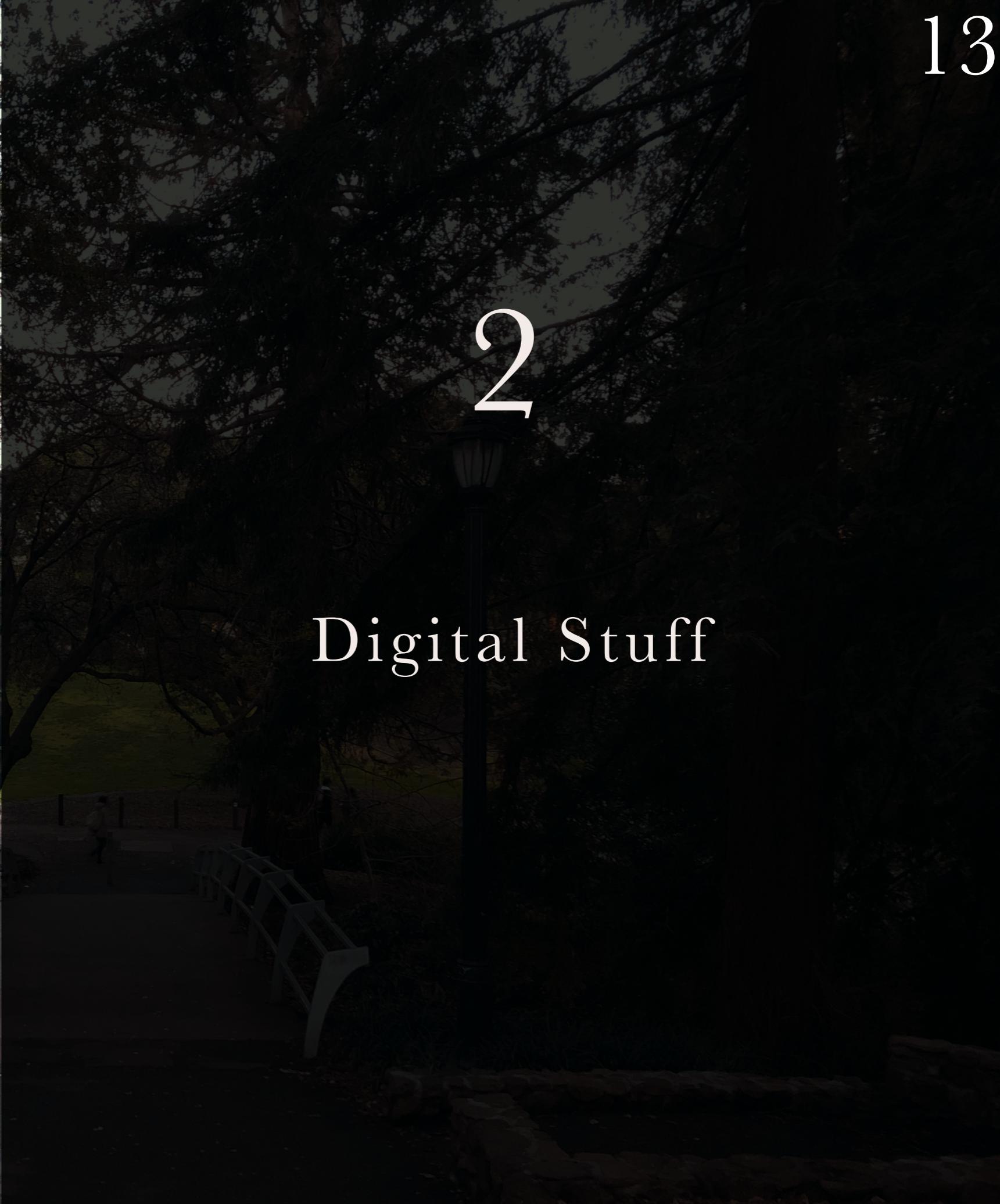


Stress App Design



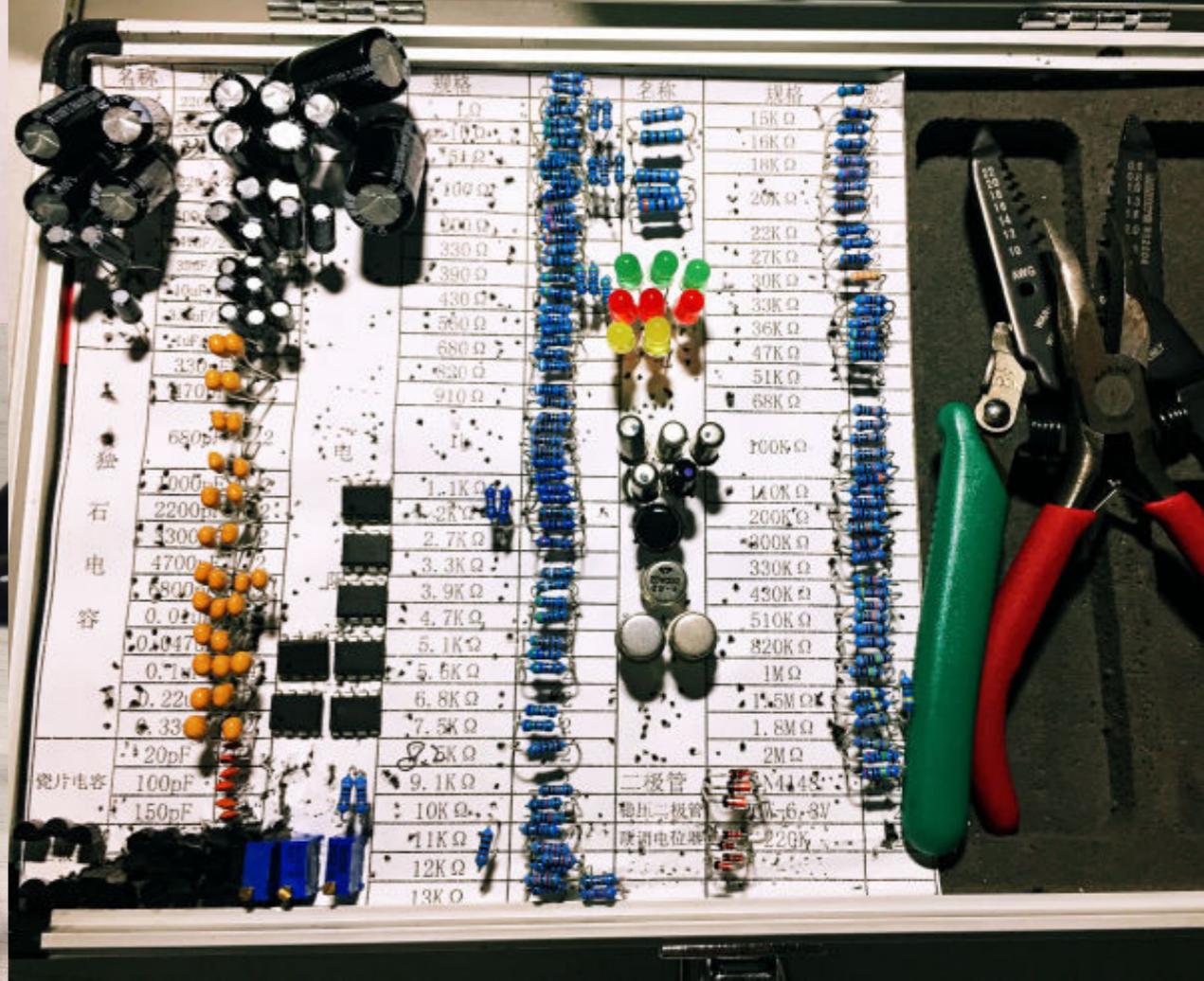
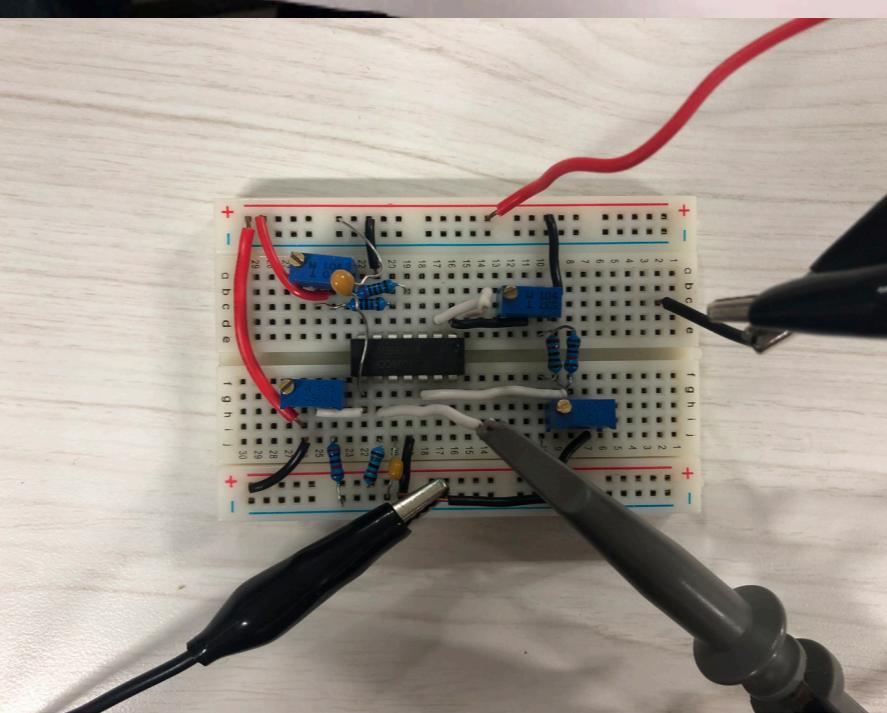
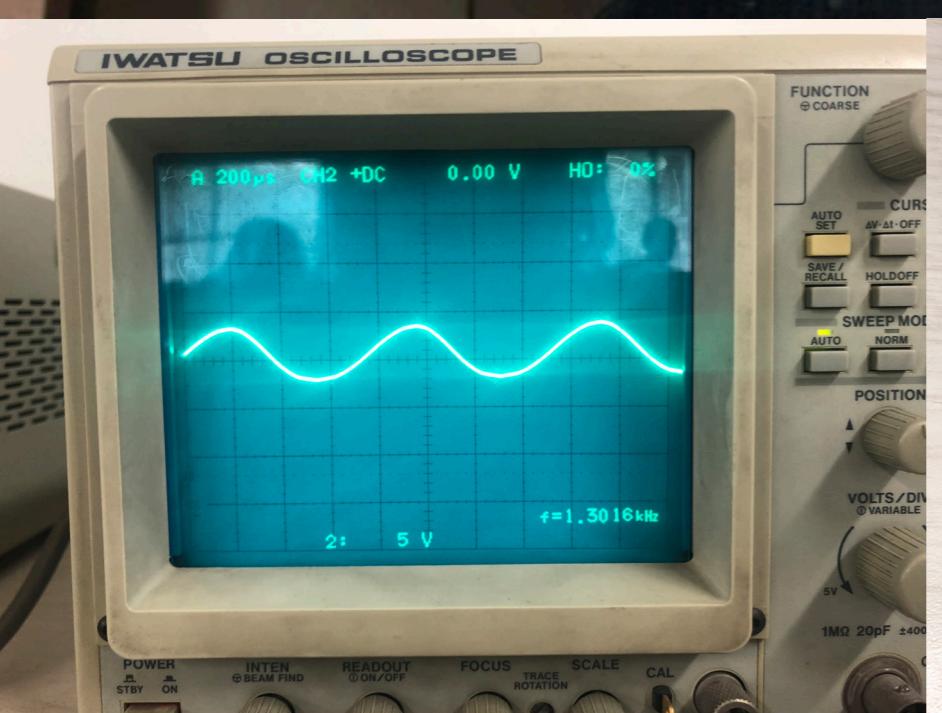
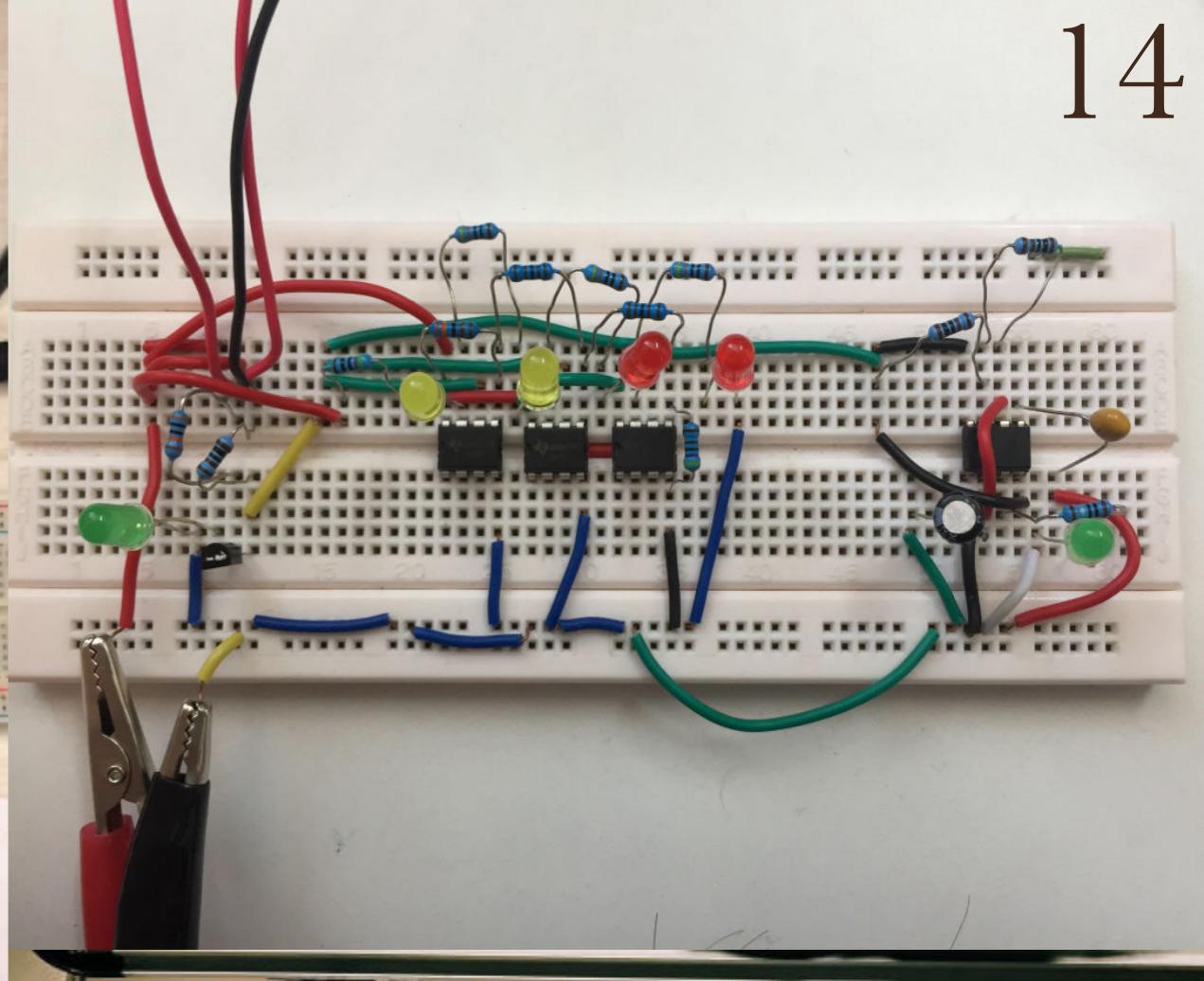
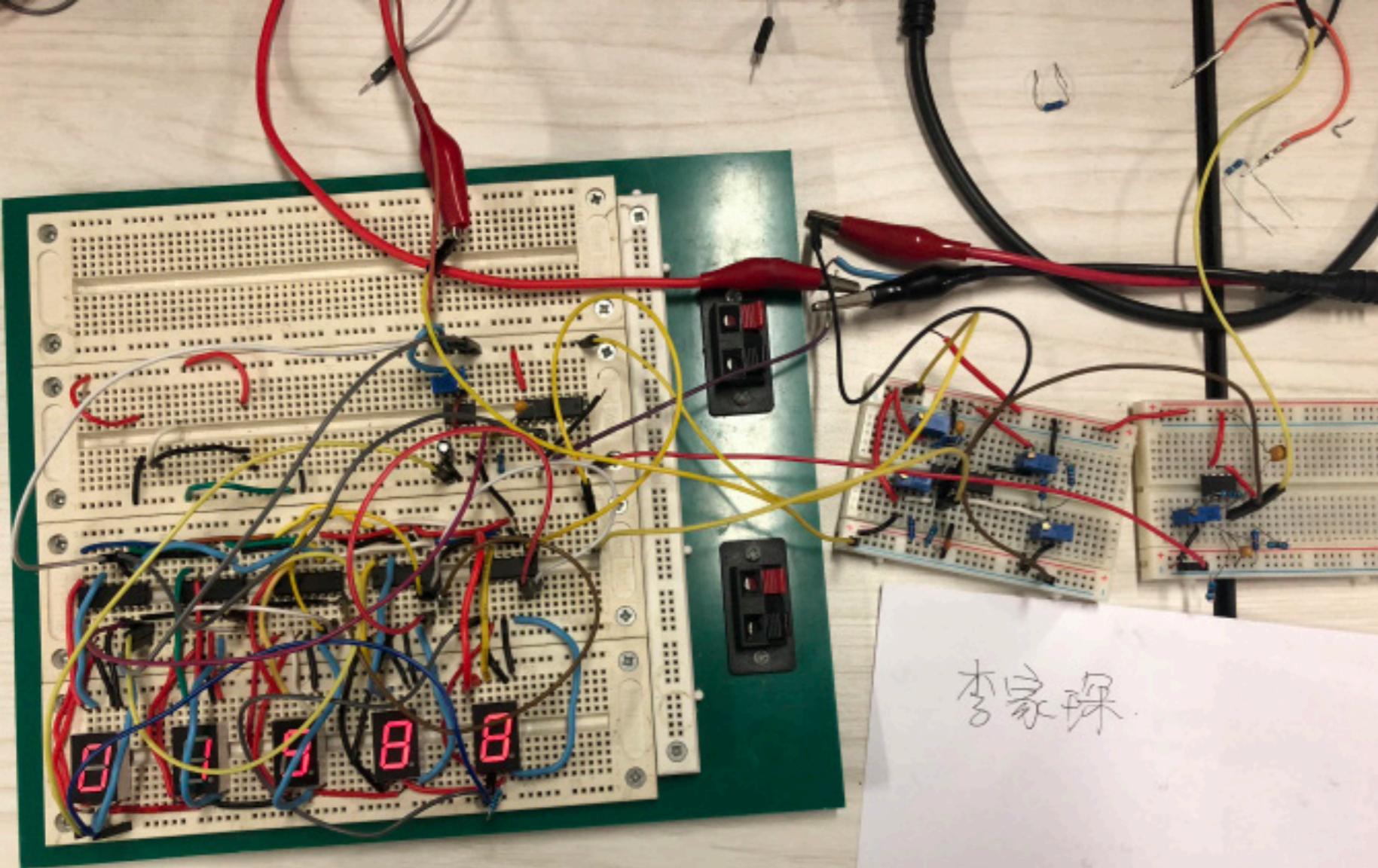
Wearable Sketches

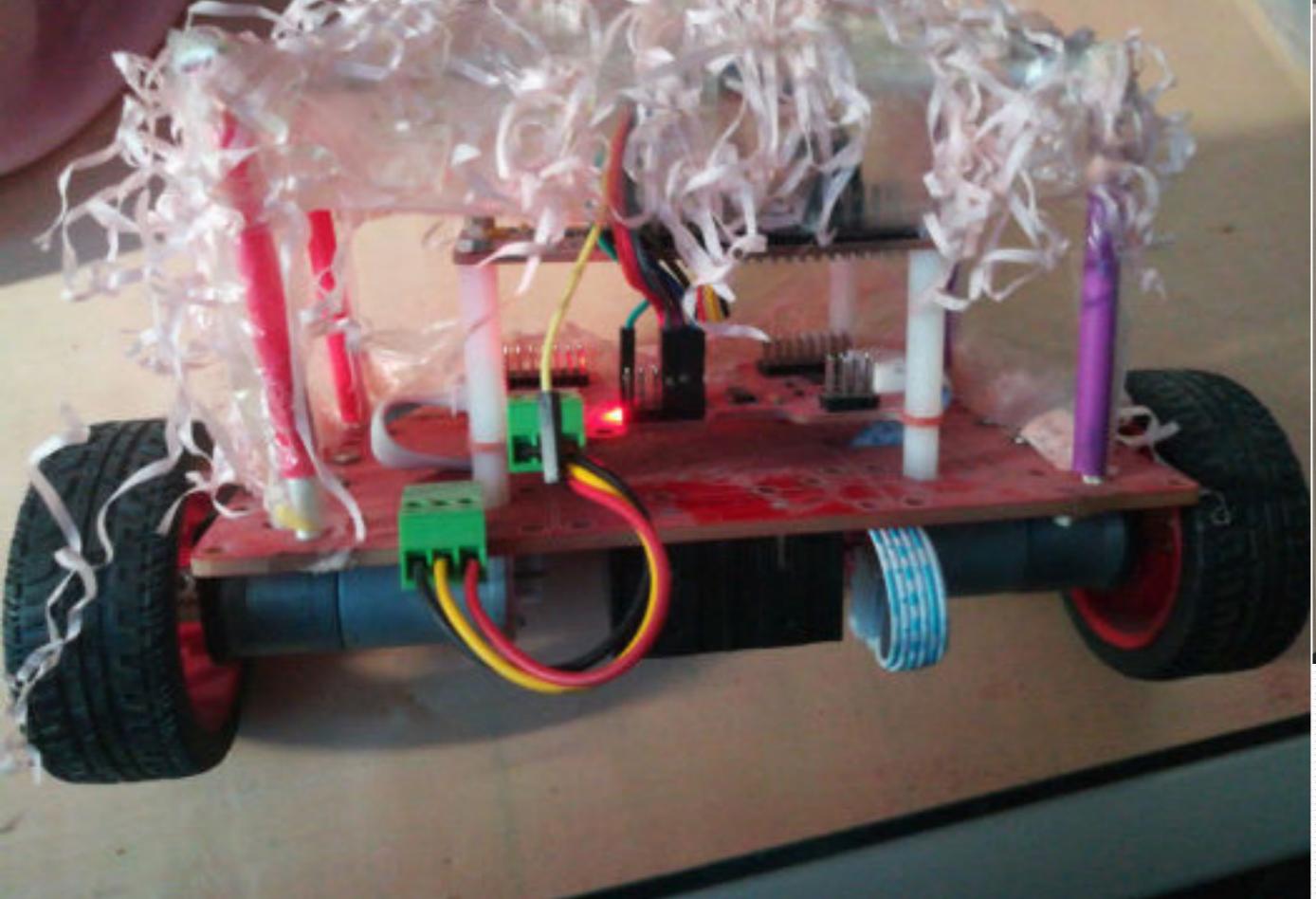




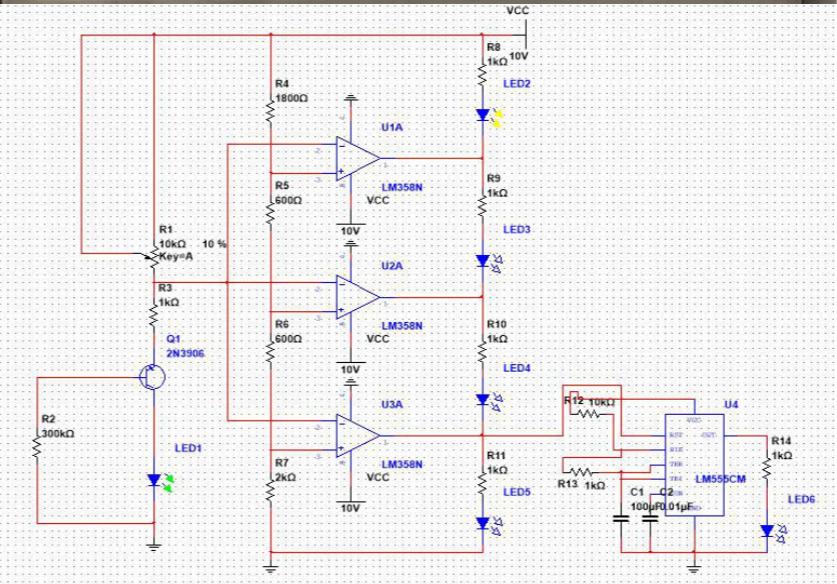
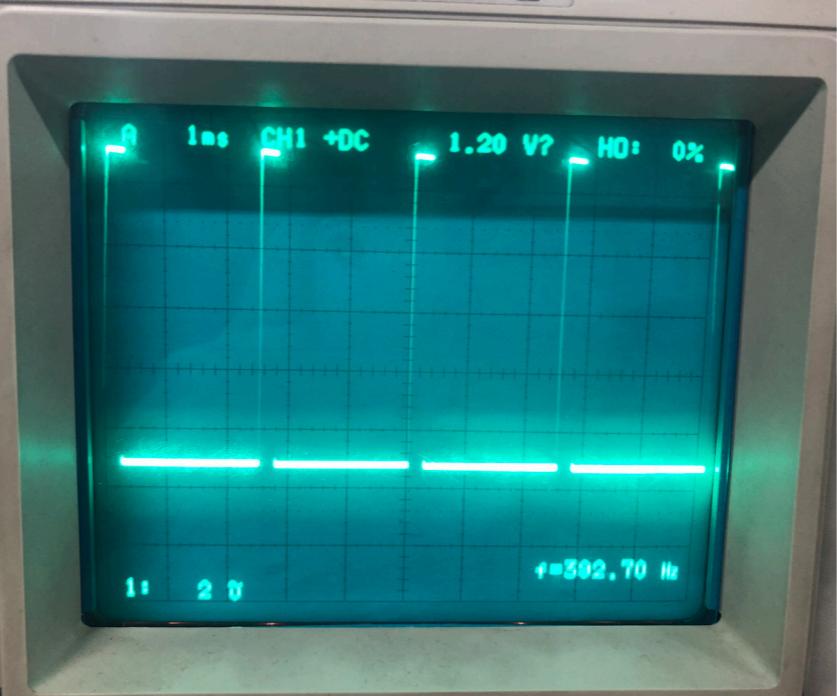
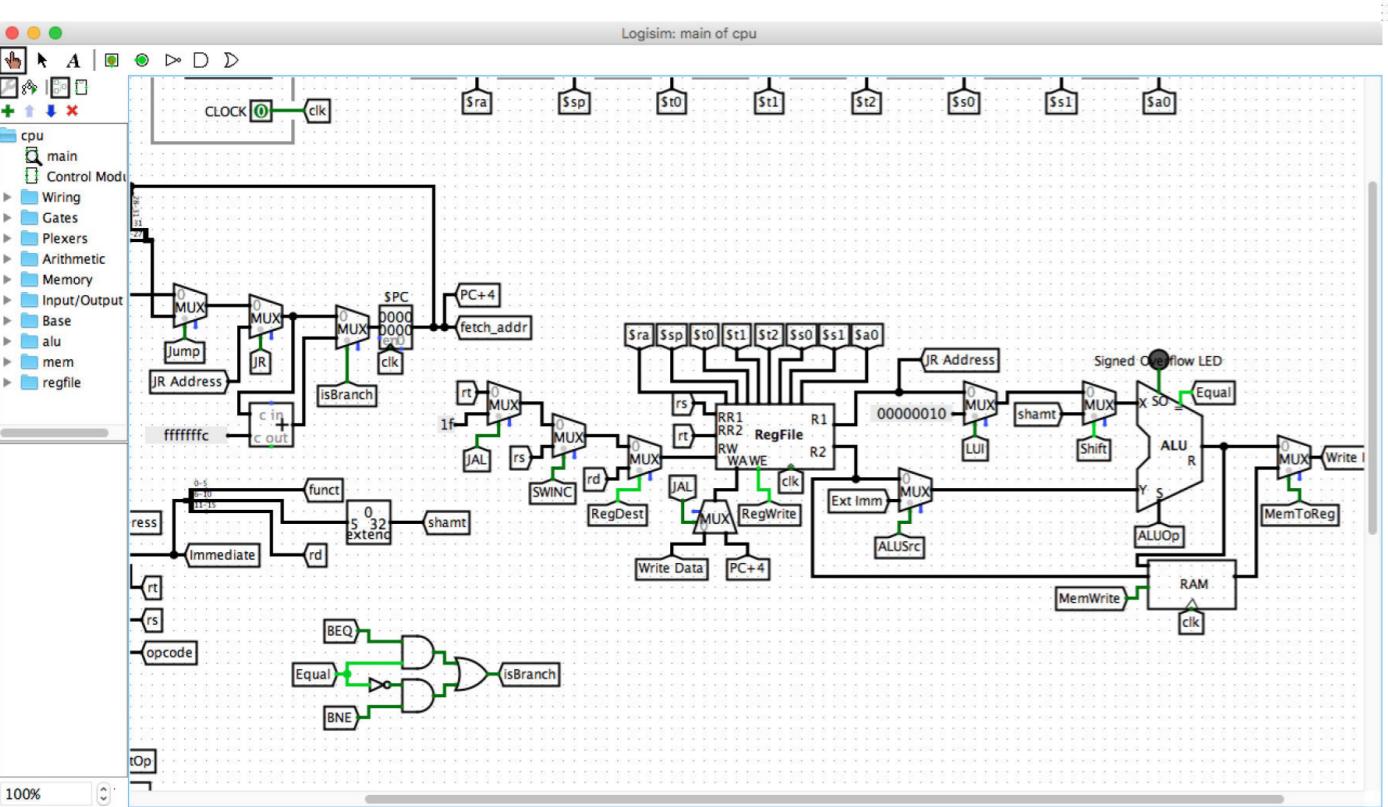
2

Digital Stuff





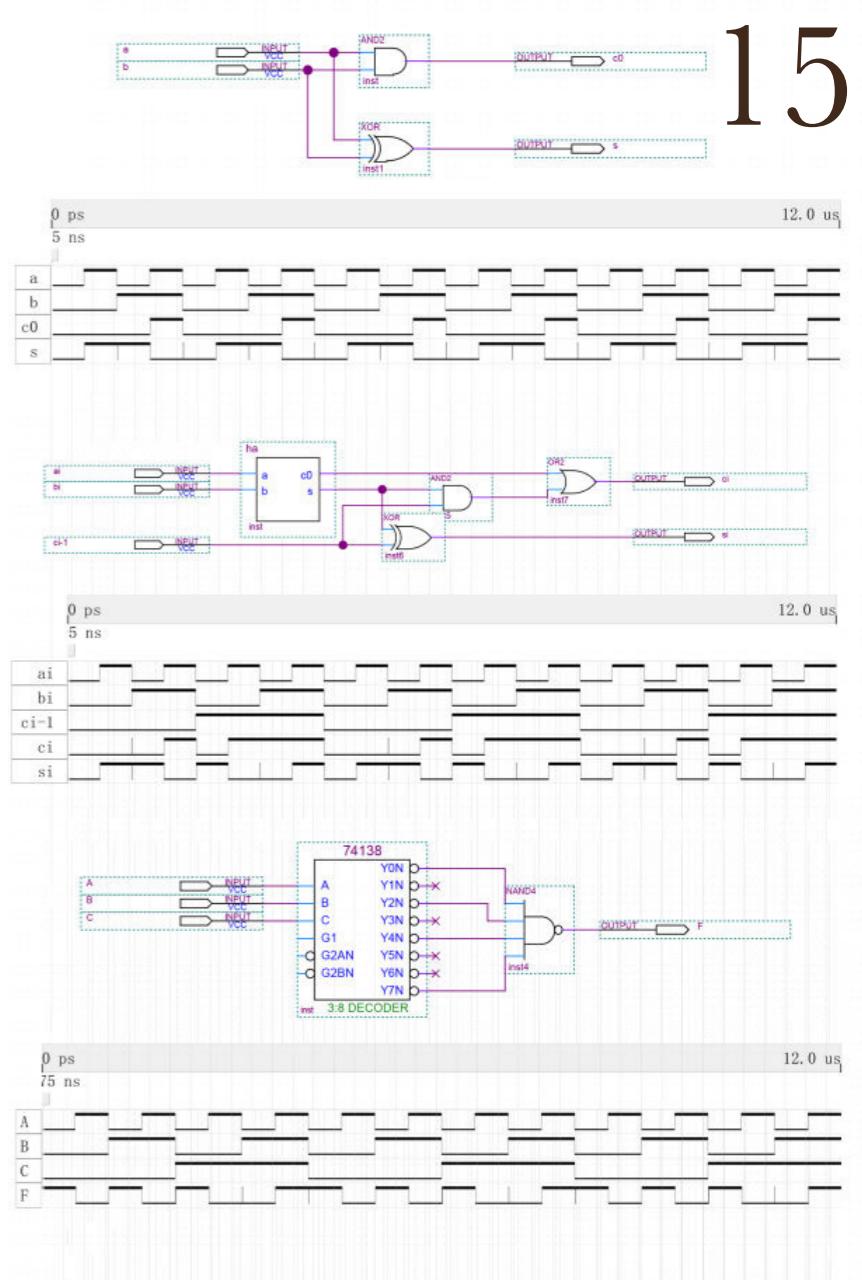
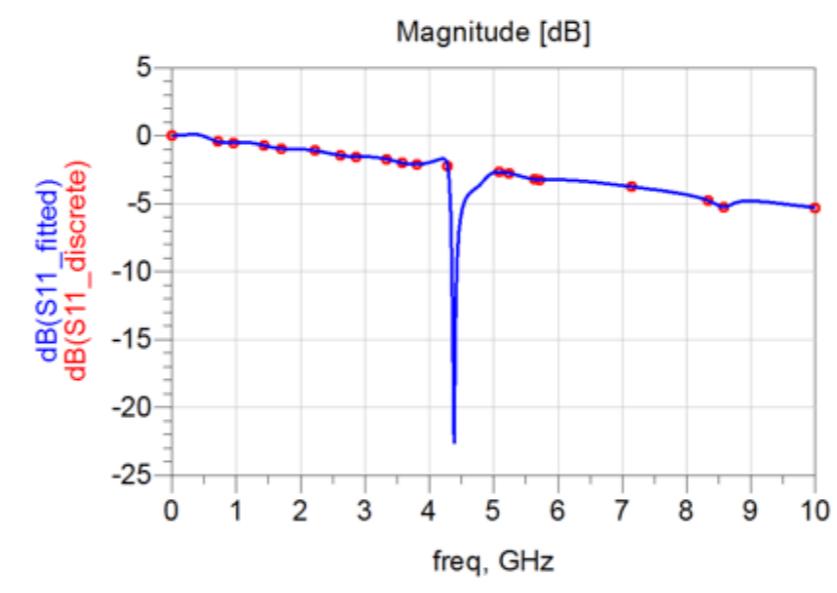
A self-balanced car



Discrete Frequencies vs. Fitted (AFS or Linear)

Adaptively Fitted Points

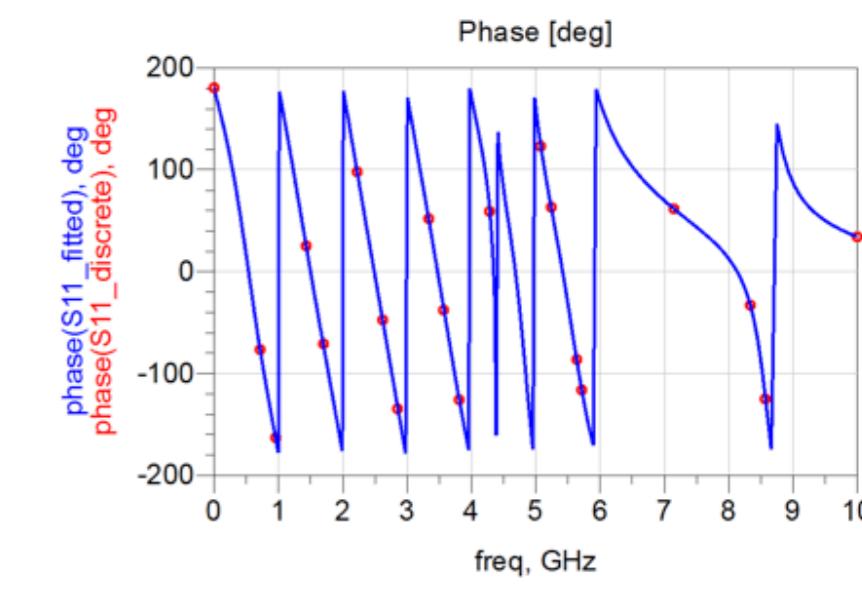
Discrete Frequency Points



Discrete Frequencies vs. Fitted (AFS or Linear)

Adaptively Fitted Points

Discrete Frequency Points



A close-up photograph of a person's hand reaching up towards a branch of cherry blossoms. The blossoms are in sharp focus, while the background is blurred with bokeh light spots from street lamps.

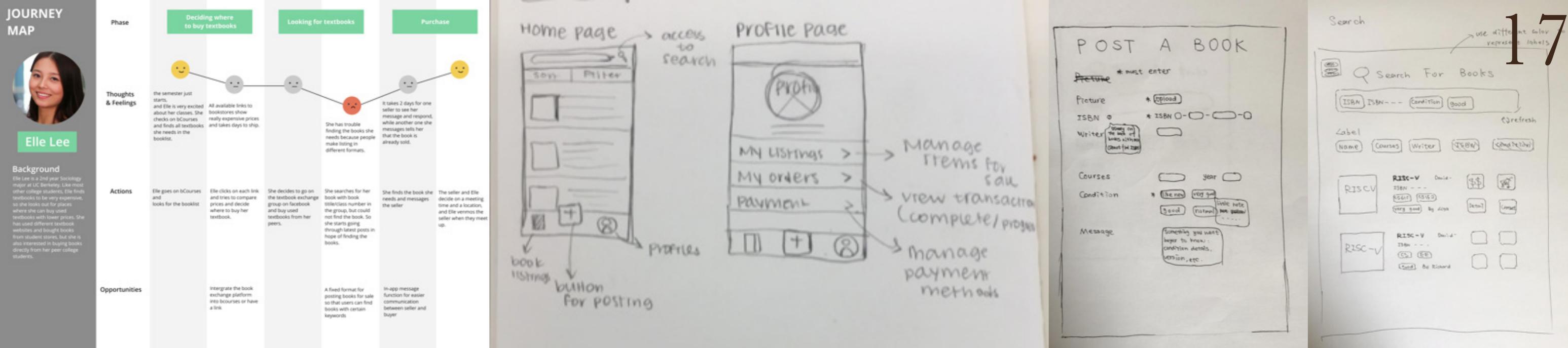
3

A photograph of a woman from behind, looking up at a large tree trunk. She is wearing a white jacket and has her arm raised. A large, semi-transparent number '3' is overlaid on the upper right portion of the image.

TexEx App Design



TexEx



constraints: only VCB students use this app

sign up :

what we want to do: ① make sure he/she is VCB student

② provide some info for the convenience of next step ③

sign up → ③ post books → ④ wait → ⑤ someone buys

info: essential: ① real name

② email → berkeley.edu

③ user name (in case for the same name)

prefer: ① grade

② department/related department

③ courses

④ contact info: phone,

⑤ other

seller

⑥ decide where & when to put books into lockers online
↓
⑦ put the books into lockers

post books / search for books

what should we do: post: connect books with other info: courses, etc.
verify the info: condition ...

search: use minimum words to get the correct result

platform: provide a worldwide standard of books (condition, price)
give both seller and buyer enough flexibility

key word: name, ISBN, writer, version courses, condition, picture

post: essential: name (include version), ISBN, picture, condition
prefer: courses, writer, message (explain the condition, etc.)

search: use all the key words to get the correct book

Some sketches

buyer

① sign up → ② search for books → ③ choose & buy → ④ decide where & when to pick up
↓
⑤ pick up

sign in :

what we should do: ① easy for users to sign in (especially when forgot password)
② difficult for others to sign in

result: everything based on email

info: user name / email + password

use email to get password if forgot

SURVEY of THIS PART :

① survey we should do: ① kinds of condition & their standard & prices (e.g. very good 50%)
(collect info on the web) ② numbers of steps ③ each website use to get the correct book
④ graphic design principle: layout, color, ...

② survey on users: ① imagine you are the buyer ...

1° keyword: which do you like most to search for books?

2° condition: ← if What do you think is a 'good' book?
How much do you think should a 'good' book cost?

3° price: prefer price decided by platform/seller?

choose a grade and the price will be decided by the grade

e.g. All 'good' book is 50% of original price

TextEx

The collage illustrates the TextEx app's interface across different screens:

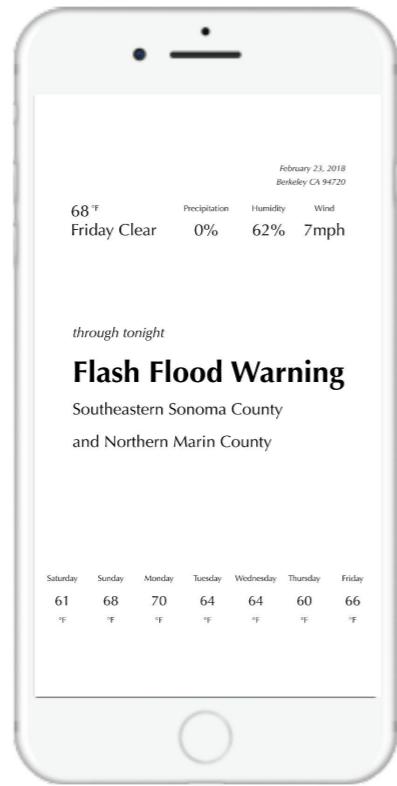
- Top Left:** A search bar with a blue icon and the text "University of California, Berkeley (Reg...)".
- Top Center:** A "My Books" screen showing a book for sale: "Macroeconomics - 8th Edition" by Abel, Bernanke, & Croushore, priced at \$23.12, Like New condition, and Econ 100B course.
- Top Right:** A "Profile" screen for "Daniel Smith" showing a profile picture, a book cover for "CALCULUS Multivariable SECOND EDITION" by Jon Rogawski, and a message from "Ashley" asking for more book pictures.
- Middle Left:** The "CalNet Authentication Service" screen with fields for "CalNet ID" and "Passphrase (Case Sensitive)". It includes "SIGN IN", "HELP", and "Sign In with" options for "MAP@Berkeley ID".
- Middle Center:** A "IN USE" section listing "Microeconomics - 4th Edition" by Paul Krugman and Robin Wells, and "Calculus - 8th Edition" by James Stewart.
- Middle Right:** A vertical menu on the right side of the screen with links to "Reviews", "Order history", "My booklist", "Help center", and "Settings".
- Bottom Left:** A search interface with a "Title" dropdown, a search bar, and a keyboard. Recent searches include "Macroeconomics - 8th Edition", "Math 110", and "Calculus".
- Bottom Center:** A detailed view of a book listing for "Calculus (Multivariable) - 2nd Edition" by Jon Rogawski, priced at \$41.71, Very Good condition, and courses Math 53 and Math 110. It shows sections for "Condition", "Courses", "Pricing", and buttons for "BUY NOW" and "MESSAGE".
- Bottom Right:** A "Detail" screen for "Calculus - 8th Edition" by James Stewart, showing a placeholder for a cover photo, ISBN information, and a barcode. It includes sections for "Add more photos", "Condition", "Pricing", and buttons for "LIST" and "SAVE".



4

Weather App Design

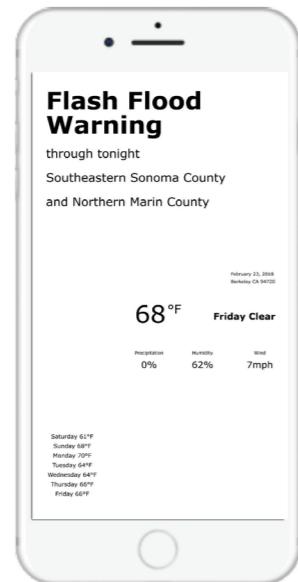
Safe & Efficient



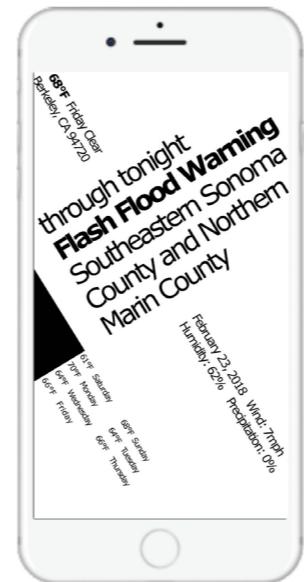
Fierce & Dynamic



Safe & Efficient



Fierce & Dynamic



Fierce & Dynamic



A close-up photograph of lavender flowers in a field, showing dense purple spikes.

5

Interesting Application

A blurred photograph of a lavender field, showing many purple flowers in the background.

Race car game

Unity



BMI calculator

9:15 PM

iOS

40

kg

体重

170

cm

身高

70

cm

腰围

1

女0 男1

性别

消息显示区

Server: kk
Server: New connection from localhost.....
kk: kjhv
Server: New connection from localhost.....
op: pppppppp

Conference room

Java



Test your calculation

Number of Exercises:

Correct:

Exercise:

Java

Wrong:

Answer:

Time:

Result:

START

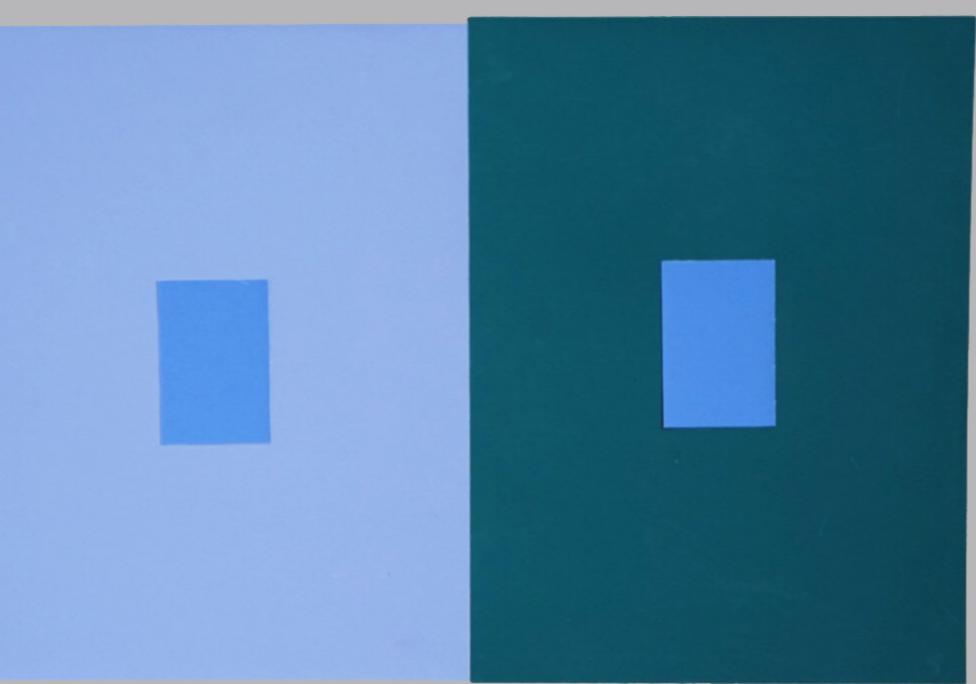
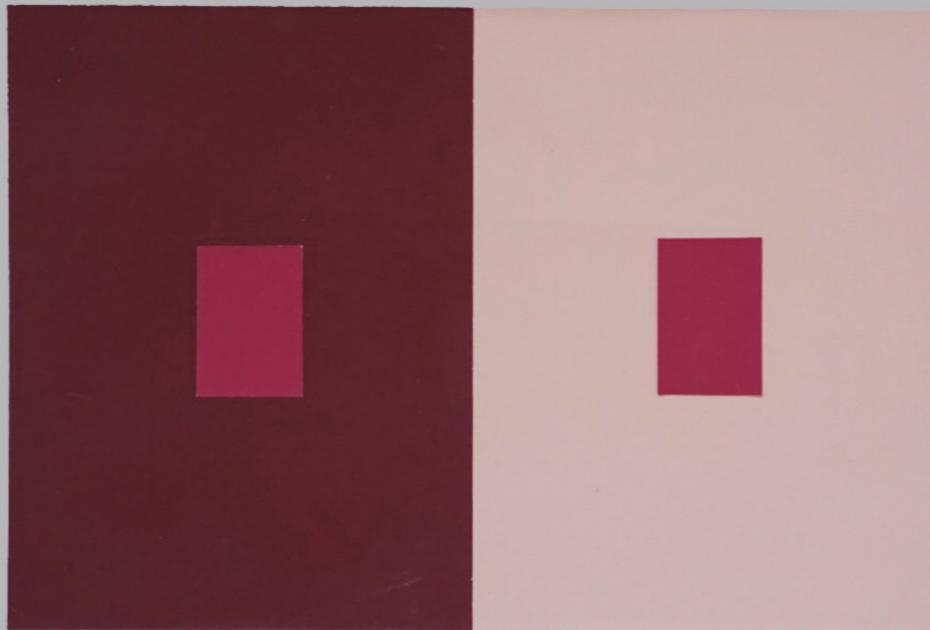
NEXT

EXIT

1. Input how many exercises you want to complete and press START on the screen
2. Enter the answer and press ENTER on the keyboard
3. View if you're correct and press NEXT and START on the screen
4. Repeat until you've finished the test
5. Press EXIT on the screen at any time to exit the test
6. Round to 2 decimals place

6

Some Craft





7

Personal Website

file:///private/var/folders/14/yxfg7vr16vndk_5fpc11_glh0000gn/T/Mobirise2018111_131456/20181201_154508/index.html

file:///private/var/folders/14/yxfg7vr16vndk_5fpc11_glh0000gn/T/Mobirise2018111_131456/20181201_154508/index.html

file:///private/var/folders/14/yxfg7vr16vndk_5fpc11_glh0000gn/T/Mobirise2018111_131456/20181201_154508/page1.html

file:///private/var/folders/14/yxfg7vr16vndk_5fpc11_glh0000gn/T/Mobirise2018111_131456/20181201_154508/page2.html

JIACHEN LI

HOME EDUCATION PUBLICATION **PROJECT** FUN

PROJECT

file:///private/var/folders/14/yxfg7vr16vndk_5fpc11_glh0000gn/T/Mobirise2018111_131456/20181201_154508/page3.html (2017-2018)

TextEx (2018)

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Photography

file:///private/var/folders/14/yxfg7vr16vndk_5fpc11_glh0000gn/T/Mobirise2018111_131456/20181201_154508/page4.html

JIACHEN LI

HOME EDUCATION PUBLICATION **PROJECT** FUN

moving forward, turning left/right and stopping.

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blood relationship labels.

Proposed an advanced process of face recognition for blood relationship.

[Learn More](#)

which is essentially an online platform for UC Berkeley students to buy and sell their used textbooks and engage in textbook exchange with other students.

[Learn More](#)

www.jiachen-li.com/page6.html

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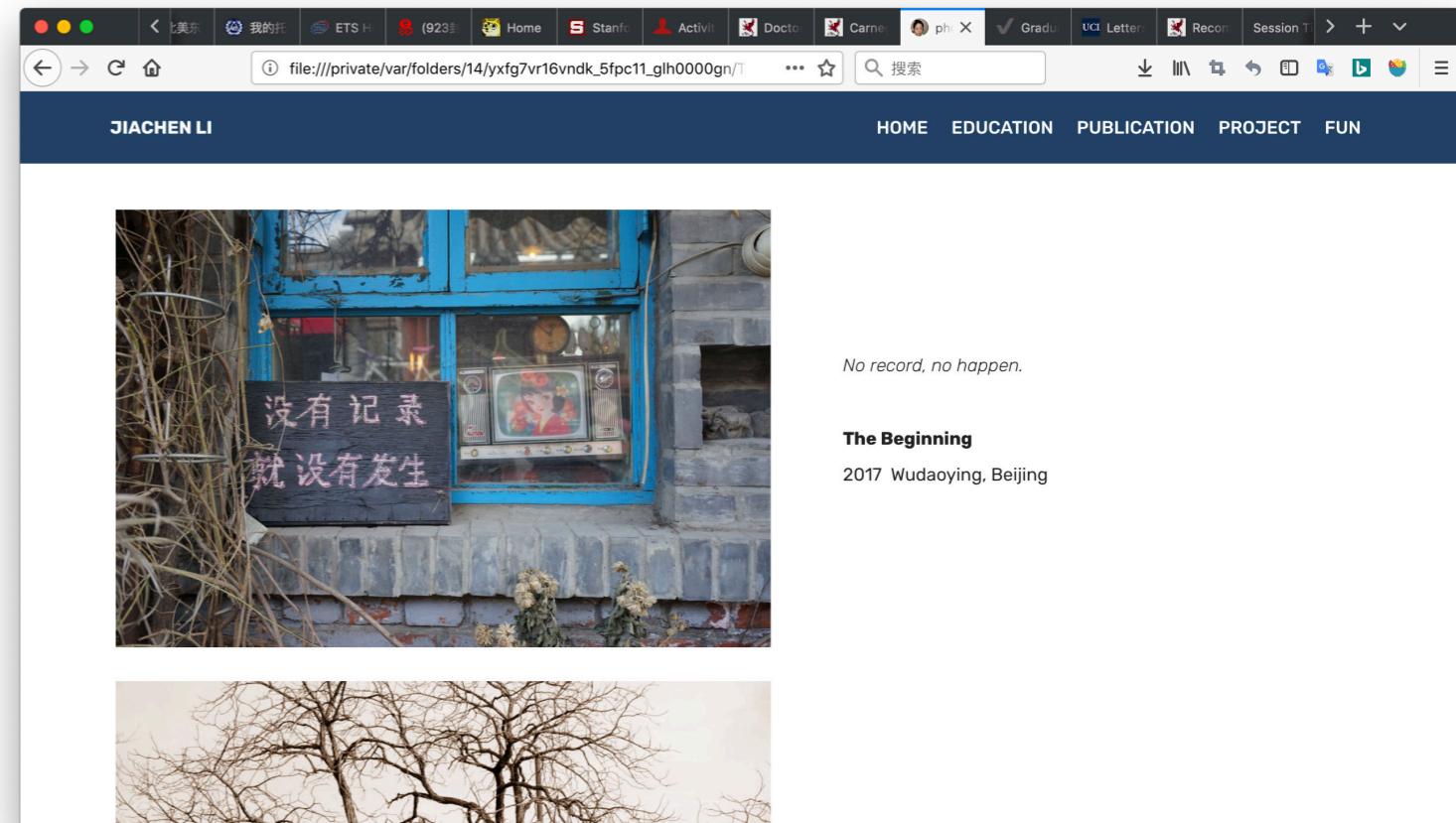
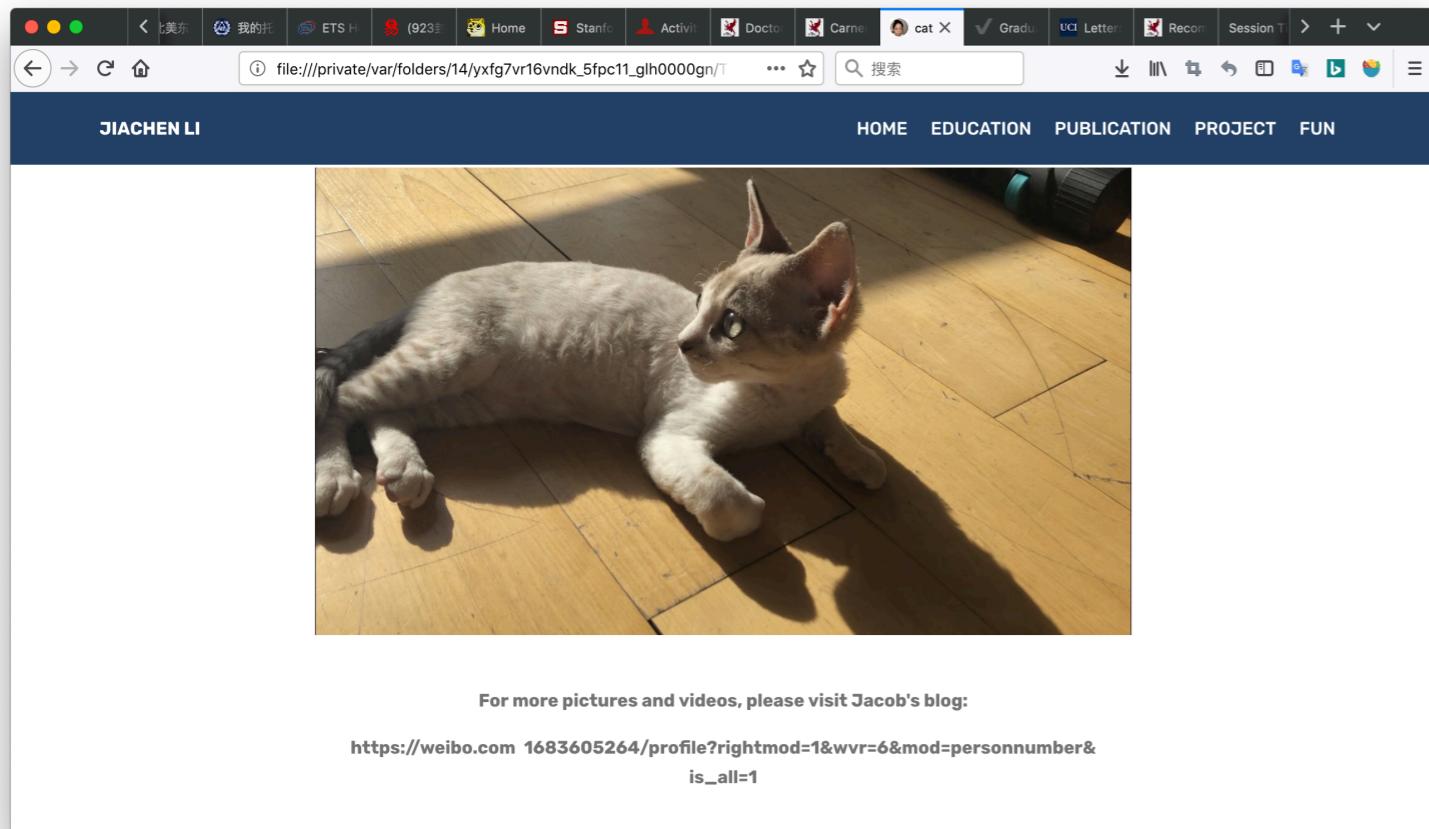
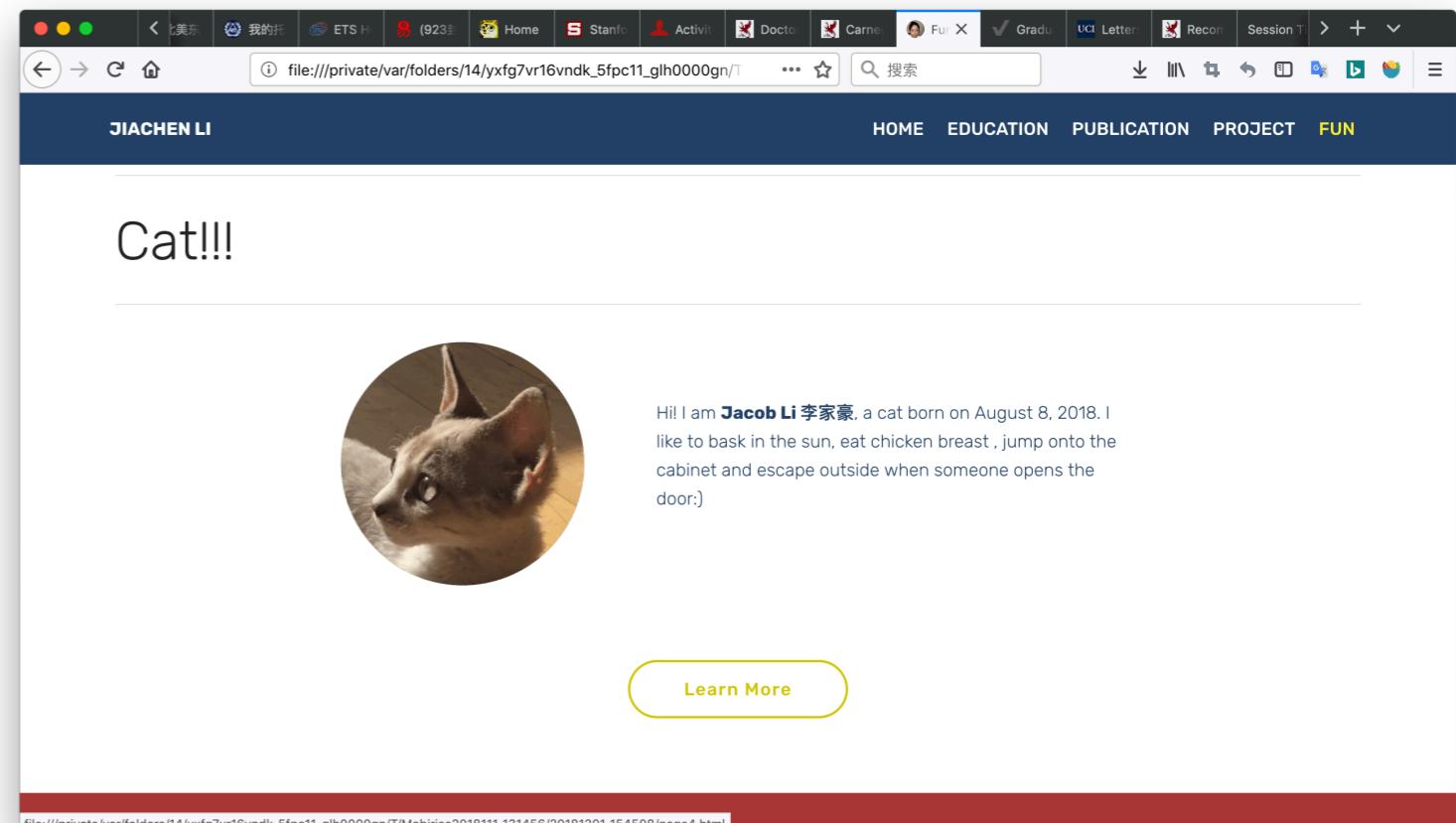
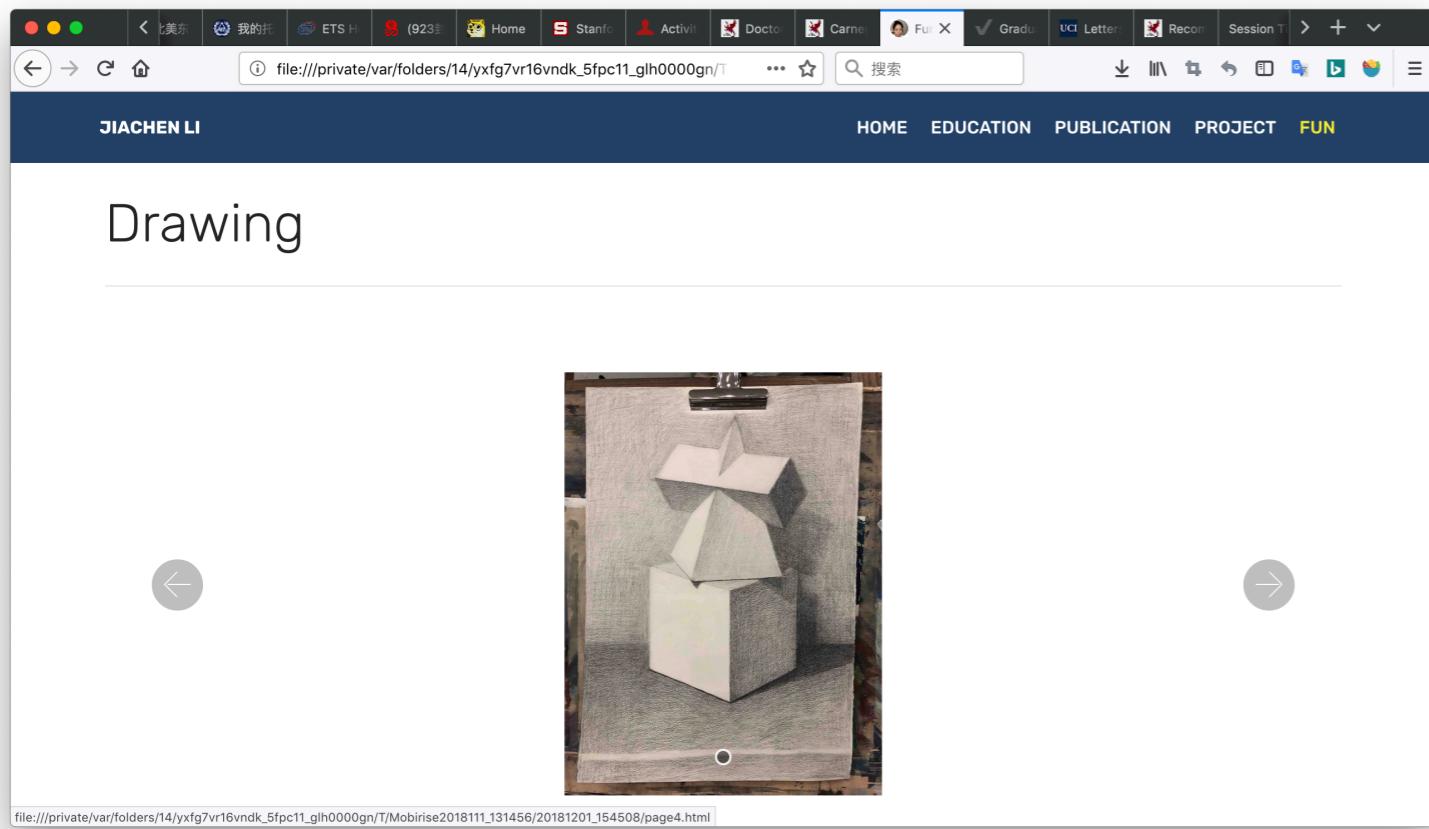
Mom is kissing the fish. Glass disappears.

Woman and fish

2017 A museum in Dubai Mall

Loving the beautiful sunshine in Berkeley. Loving you.

www.jiachen-li.com/page4.html



A close-up photograph of a light-colored, possibly cream or beige, cat with dark markings on its ears and paws. The cat is walking across a light-colored wooden floor with visible planks. It is looking towards the right of the frame.

END

Thank you very much!

Jiachen Li

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