

Design: Iteration

No screens



Prof. Lydia Chilton
COMS 6998
2 November 2018

Say your name



User Interface Design

COMS 4170 · Spring 2018

Home Syllabus Assignments ▾

Part 1 Build websites that suit the needs and abilities of users.

Part 2 When the needs and abilities of users are uncertain, design systems

You already know front-end web dev:
HTML, JavaScript, Bootstrap, jQuery

And design:
Iterative design, critique

Advanced Web Design Studio

COMS 6998 · Fall 2018

Home Syllabus

Goals

1. Master front-end and back-end technologies for making interactive websites.
2. Discover specific user needs by developing a low-level, mechanical model of human behavior.
3. Practice iterative design to meet specific user needs.

INSTRUCTOR

Prof. Lydia Chilton
OH: Tuesdays 4-5, CEPSR 612

Please contact staff through [Piazza](#) only

TAS

Katy Gero
OH: TBA, CS OH room

Savvas Petridis
OH: TBA, CS OH room

You will learn back-end web dev:

- Server-side programming (Flask),
- Databases (Sqlite, SQLAlchemy)
- Real-time Communication (Socket.IO)

And practice web design by:

- Rebuilding IMDB.com
- Rebuilding twitter
- Pursuing your own project

Today's goal:

Pick a project &
Come up with a timeline

Project Requirements

- **Idea (20%)**
 - Meets a specific user need
 - You can tell from the UI whether or not they are satisfied.

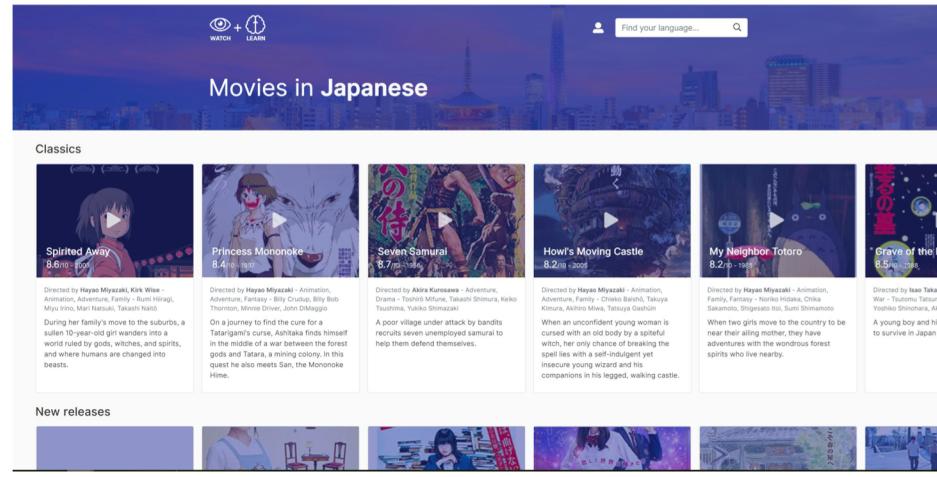
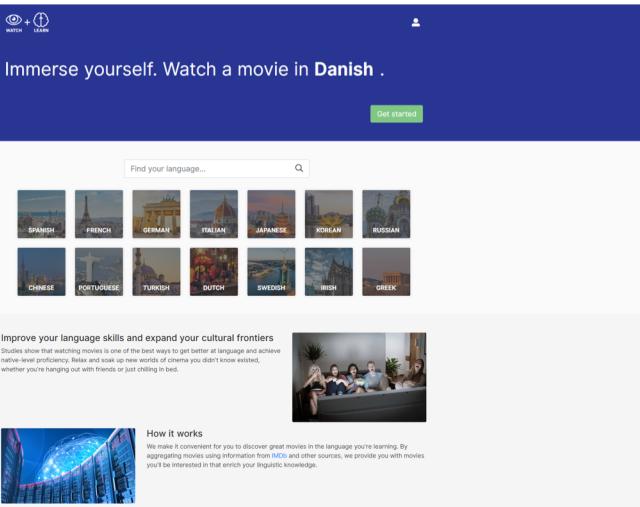
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- **Functionality (40%)**
 - Must be a website with a database using CRUD or real-time data interaction.
 - Does the primary functionality work?
 - Does the secondary functionality work (user accounts, log in)

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 - Must be a website with a database using CRUD or real-time data interaction.
 - Does the primary functionality work?
 - Does the secondary functionality work (user accounts, log in)
- **Graphic Design (40%)**
 - Does the graphic design help the user focus on their task and complete the goal?

Expectations



Specific user goal:
Find a movie in a language
you are learning

Warning
Sales pitch: “immerse yourself”
Specific user goal: “find a movie”

Functionality:
Helps the user meet their need –
Can play the movie right away!

Graphic design:
Nice big pictures. (primary)
Layout groups movies by type. (primary)
Picture of city in background (secondary)

Know when it's met:
Do they start watching it?
(Or put it in their queue)

Would you accept this?

Criteria:

1. Addresses a specific user needs?

2. Know when need is satisfied?

3. Functional?

4. Graphic design guide user?

The screenshot shows the homepage of the University of Columbia's Directory of Classes. The header features the text "University of Columbia" above "Directory of Classes". Below the header is a navigation menu with links labeled A through Z. The main content area contains several search and information sections:

- Course Listings by Subject**: Includes links for each letter of the alphabet (A-Z).
- Course Listings by Department**: Includes links for each letter of the alphabet (A-Z).
- Keyword Search**: Includes fields for "Keywords", "Instructor", "Semester", "Weekday", "Class start time", and three dropdown menus for each, all set to "All". There is also a "Search" button.
- Affiliated Institutions**: A link to "Teachers College course information".
- Home Pages**: A link to "Instructors with home pages".

At the bottom of the page are links for "About This Directory", "School Bulletins", "CU Home", and "SSOL".

Would you accept this?

Criteria:

1. Addresses a specific user needs?
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4. Graphic design guide user?

The screenshot shows the Thesaurus.com website interface. At the top, there are tabs for "Dictionary.com" and "Thesaurus.com". The "Thesaurus.com" tab is active, indicated by a blue background. Below the tabs is a search bar with the word "design" entered. To the right of the search bar is a magnifying glass icon. The main content area displays the word "design" in large bold letters. Below it, there are several categories of words: nouns, verbs, and adjectives. Under "nouns", there are four groups: "sketch, draft" (orange), "artful conception" (yellow), "intention" (light orange), and "plan, outline" (light yellow). Under "verbs", there are three groups: "create, conceive" (light orange), "outline" (light yellow), and "paste-up" (light orange). Below these are two sliders: "Relevance" and "Length". The "Synonyms for design" section lists words categorized by part of speech: nouns, verbs, and adjectives. The nouns are arranged in a grid:

Architecture	Layout	Scheme	Delineation	Outline
Arrangement	Map	Study	Depiction	Paste-up
Composition	Method	Blueprint	Diagram	Perspective
Construction	Model	Chart	Doodle	Tracery
Drawing	Pattern	Comp	Dummy	Tracing
Form	Picture	Conception	Formation	Treatment
Idea	Plan	Constitution	Makeup	

On the far right, there is a "Word Origin & History" sidebar with the following text:

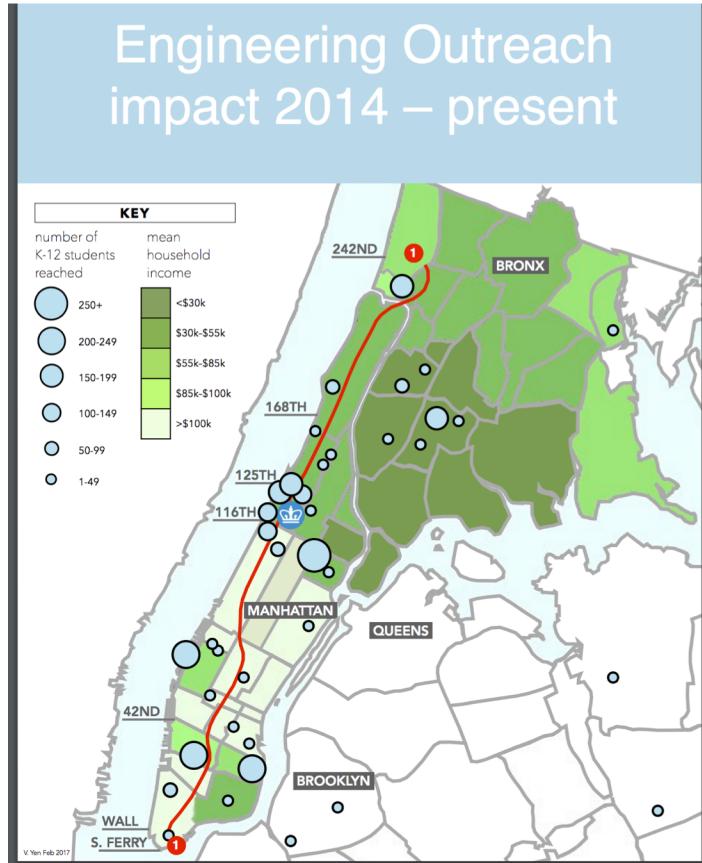
1540s, from Latin *designare* 'devise, choose, designate', from *de-* "out" (see *de-*) + *signare* 'sign', from *signum* "a mark, sign" (n.). Originally in English meaning now attached to many modern uses of design, as in *metaphoric extensions*. First used in English c. 1540s.

Designed; [designing](#).

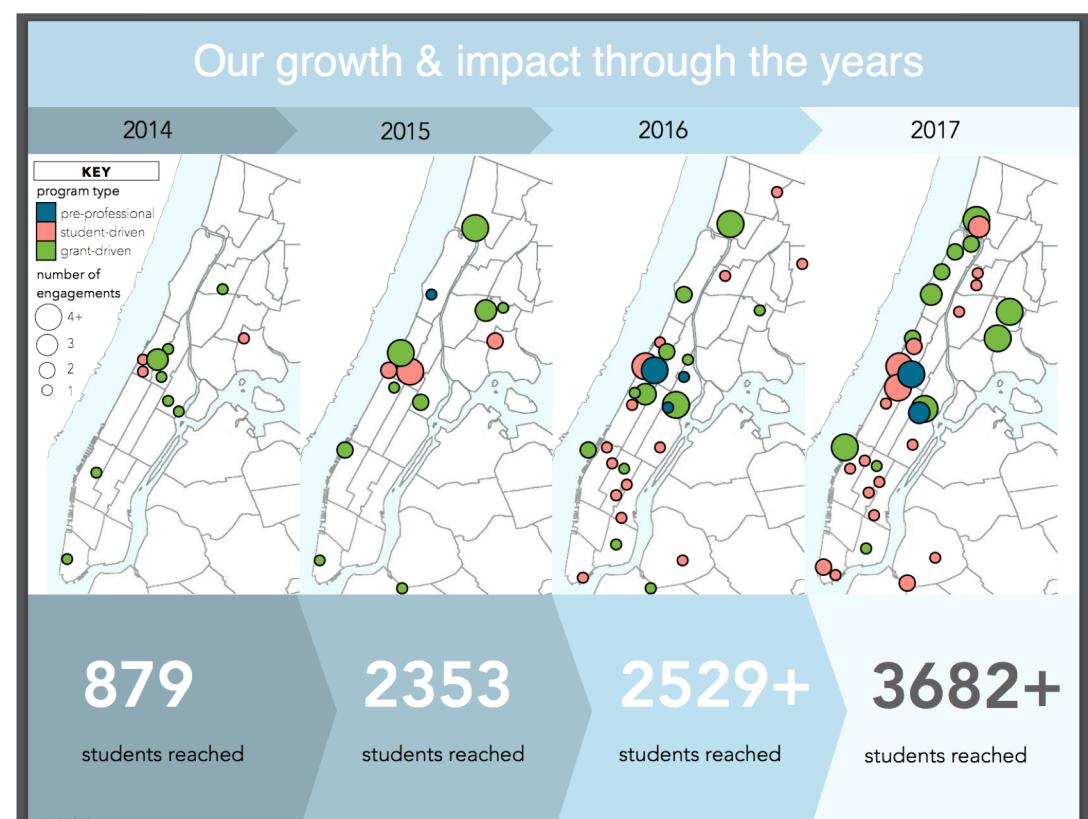
If you aren't excited about any of
your ideas, consider this project

Client: Columbia Outreach

Specific user goal: Take data they have on outreach goals and map it to answer some questions.



What projects reach the most students?



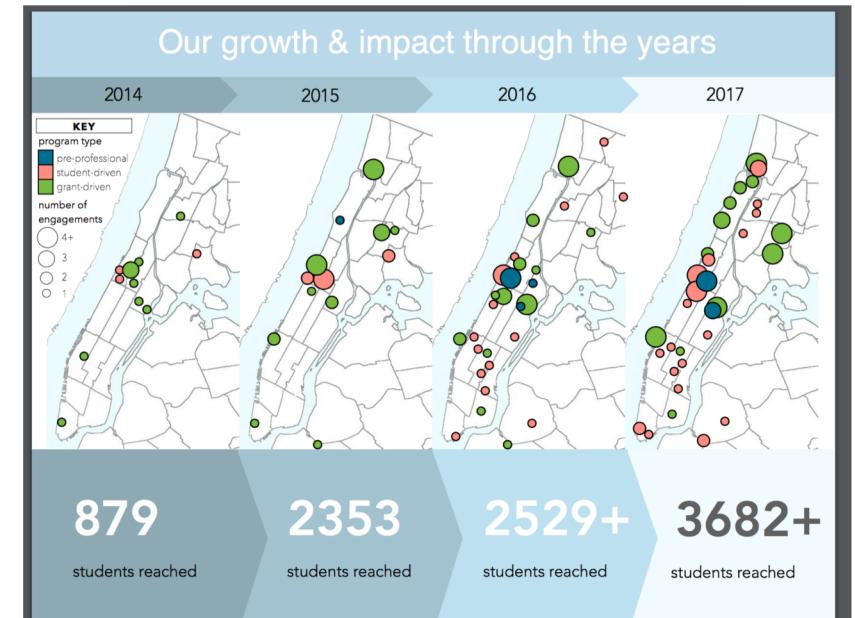
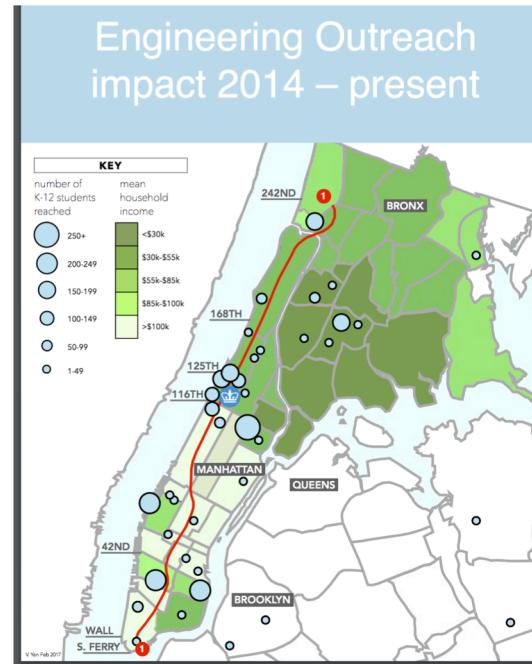
Over the years, what locations and program types have grown the most?

You will get 2017 data in Excel.

Build tools to query the database

Year17

	A	B	C	D	H	I	J
1	Program	Date	General Activity	Keywords	# Participants	Time per Session	
2	Engineering Speaks	12/15/17	Presentation	Industrial Engineering & Operations Research	67	1	
3	Engineering Speaks	12/1/17	Presentation	Intro to Engineering	14	1	
4	MRSEC	3/4/17	Special Event	Info Session, Demonstration	50	2	
5	Engineering Speaks	9/27/17	Presentation	Bio Physics	43	1.5	
6	Engineering Speaks	10/5/17	Presentation	Research	31	0.5	
7	Engineering Speaks	10/19/17	Presentation	Biomedical Engineering, Intro to Engineering	45	2	
8	SEAS Outreach	8/10/17	Special Event	Info Session, Workshop, Demonstration	30	2	
9	SEAS Outreach	2/24/17	Special Event	Info Session, Mentoring	200	7	
10	SEAS Outreach	3/3/17	Special Event	Info Session, Recruitment	75	3	
11	SEAS Outreach	3/29/17	Special Event	Info Session, Recruitment	138	5	
12	SEAS Outreach	5/20/17	Special Event	Info Session, Recruitment	80	6	
13	SEAS Outreach	6/11/17	Special Event	Robotics, Info Session, Recruitment	50	4	
14	ENG	8/10/17	Ongoing Programming	Research, Summer Program	14	1200	
15	ENG	9/28/17	Ongoing Programming	Symposium, Research, Summer Program	8	1.5	
16	Engineering Speaks	2/10/17	Presentation	Computer Science, Intro to Engineering	28	2	
17	Engineering Speaks	3/24/17	Presentation	Presentation	60	3	
18	Engineering Speaks	3/29/16	Presentation	Presentation	50	3	
19	Engineering Speaks	4/7/17	Presentation	Presentation	150	2	
20	Engineering Speaks	5/11/17	Presentation	Presentation	60	2	
21	Engineering Speaks	11/3/17	Presentation	Biomedical Engineering	114	2.5	
22	Engineering Speaks	11/10/17	Presentation	Intro to Engineering, Research	15	1	
23	Engineering Speaks	12/1/17	Presentation	Chemical Engineering	40	1	
24	Girls Who Code	12/7/17	Ongoing Programming	Coding Class	50	49.5	
25	Girls Who Code	2/10/17	Ongoing Programming	Coding Class	50	40	
26	Inside Engineering	3/22/17	Lab Visit	Industrial Engineering & Operations Research	18	3	
27	Inside Engineering	3/27/17	Lab Visit	Earth & Environmental Engineering	10	2	
28	Inside Engineering	4/27/17	Lab Visit	Engineering with Applied Physics & Applied	17	2.5	
29	Inside Engineering	5/2/17	Lab Visit	Electrical Engineering	7	2	
30	Inside Engineering	5/4/17	Lab Visit	Biomedical Engineering	24	2	
31	Inside Engineering	7/20/17	Lab Visit	Biomedical Engineering	25	1	
32	Inside Engineering	7/27/17	Lab Visit	Electrical Engineering	60	3	
33	Inside Engineering	10/21/17	Lab Visit	Biomedical Engineering	21	1	
34	Inside Engineering	11/21/17	Lab Visit	Engineering with Applied Physics & Applied	30	2	
35	Inside Engineering	12/6/17	Lab Visit	Mechanical Engineering	30	1	
36	Inside Engineering	12/7/17	Lab Visit	Civil Engineering	48	2	



First task: reproduce these types of charts

Studio: Review Prototypes.

Help you pick a project.

- Count off by 4 –
 - We need a volunteer to go first in each group
 - Introduce your 3 ideas and your prototypes
 - Which one are you leaning towards? Ask for feedback.
 - If you see problems, speak up!
- Groups 1 & 2 – Discuss as a group first. Then Katy and I will come around.
- Groups 3 – Discuss with me, then as a group
 - Discuss!
- Group 4 – Discuss with Katy, then as a group

Due today by 9pm – what idea will you pick? Fill out a weekly plan.

Final Project: Timeline

- Week 9: November 2 (today)
 - **Idea:** Low-Fi Prototypes due
 - Project Proposals on Piazza
- Week 10: November 9 due:
 - **Functionality:** One key (risky) feature implemented and user tested
 - In class user testing
- Week 11: November 16 due:
 - **Functionality:** Iterate on key feature + implement supporting feature
 - In class user testing
- Week 12: November 30 due:
 - **Graphic Design:** Decide the user flow through the application and how the graphic design will help them navigate
 - in class: how do users know their goal is done?
- Week 13: December 7 due:
 - **Graphic Design:** make it pretty! Thematic images, fine tune white space, fonts, and sizes of things.
 - In class: Turn in draft of final write up – bring it to class. Get feedback.
- Week 14: **Thursday Dec 13 11:59**
 - Lots of office hours!
 - DUE

We use iteration to minimize risk by prototyping the riskiest elements first.

Idea:
Help NBA fans
Recognize the
strategy
during games



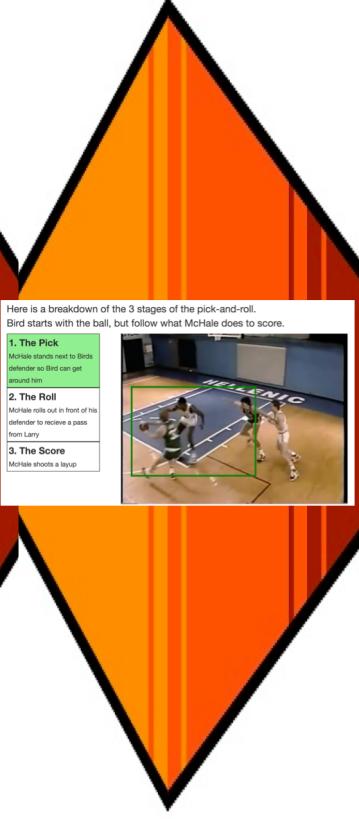
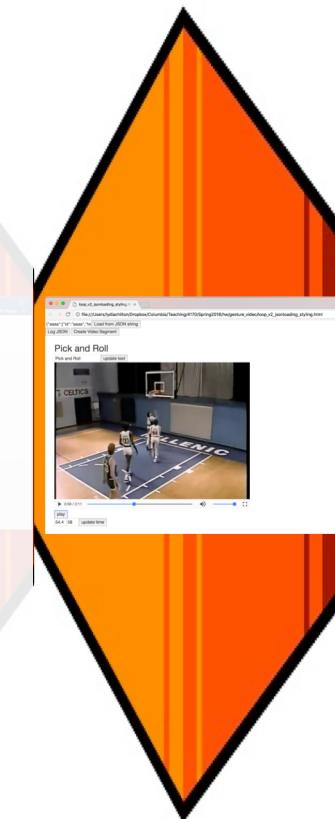
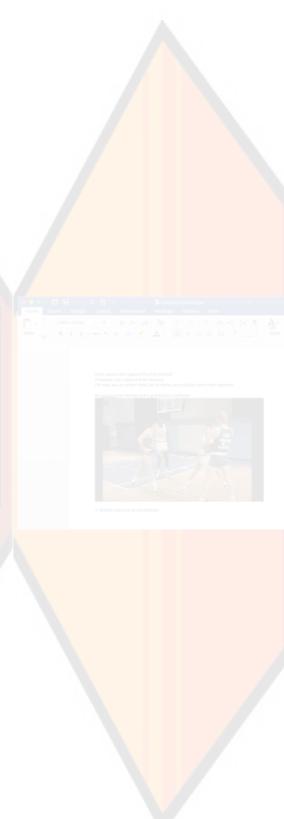
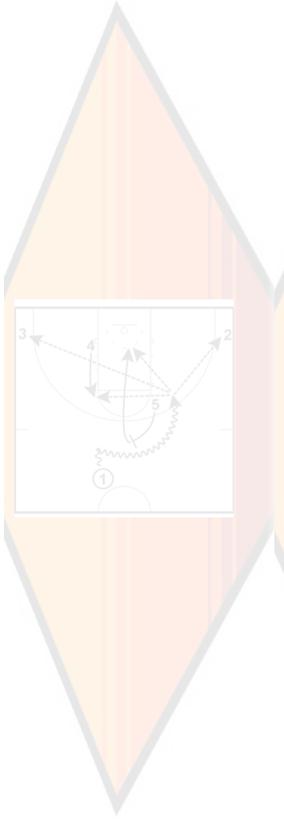
Idea Resources Design

Paper! Google it! User test!

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Help NBA fans
Recognize the
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during games



Idea

Resources

Design

Technical

Design

Idea

Design

Final Project: What to turn in

- **A write up**
 - What's the specific user goal?
 - What is the concrete steps they take to achieve it.
 - Take a screen shot and say what the user does
 - And what graphic design elements guide them to do it.
- **A video** of the user accomplishing their goal
- **Your code**
 - We will only run your code as a last resort!

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