

Brainstorming Specific Needs

No screens



Prof. Lydia Chilton
COMS 6998
21 September 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

Last week's high level goal:

- Remake the basic functionality of IMDB.com:
 - User goal: “Look up what actor was in what movie and then see all the other movies that actor is in.”
- Must store data in a **SQLite database**
- Must query it with **SQLAlchemy**
- Must Enable **CRUD** operations (create, read, update, delete)
 - This is not actually user-facing functionality of IMDB, but it's essential back-end dev)
- Must use at least one **Database Join**

Dictionaries vs. Database Tables

```
movies = {
    '1': {
        'title': "Crazy Rich Asians",
        'rating': "PG-13",
    },
    '2': {
        'title': "Mission Impossible: Fallout",
        'rating': "G",
    }
}
```



```
actors = {
    '1': {
        'name': "Henry Golding",
        'year_of_birth': "1987",
    },
}
```

“Movie” table

id	title	rating	year
1	Crazy Rich Asians	PG-13	2018
2	MI: Fallout	G	2018

“Actor” table

id	title	Year_of_birth
1	Henry Golding	1987
2	Constance Wu	1982

Join tables

“Movie” table

id	title	rating	year	Actors_backref
1	Crazy Rich Asians	PG-13	2018	(automatic)
2	MI: Fallout	G	2018	

“Actor” table

id	title	Year_of_birth	Movie_backref
1	Henry Golding	1987	(automatic)
2	Constance Wu	1982	
3	Tom Cruise	1962	

Movie_actor_join

Movie_id	Actor_id
1	1
1	2
2	3
3	3
4	3
5	3

```
Actors.query.get(3).movie_backref
```

```
Movies.query.get(1).actors_backref
```

10-min Partners Discussions:

- Show your partner your interface and how a user navigates it.
- Share one thing you learned
- Show them your code for how you insert things in the join table.
- What other information would you like to include in the database?
 - How would you store it and query it?

Next week:

**Build a web app that meets a
specific user need in the
movie data domain**

(That is not a specific need that IMDB supports well)

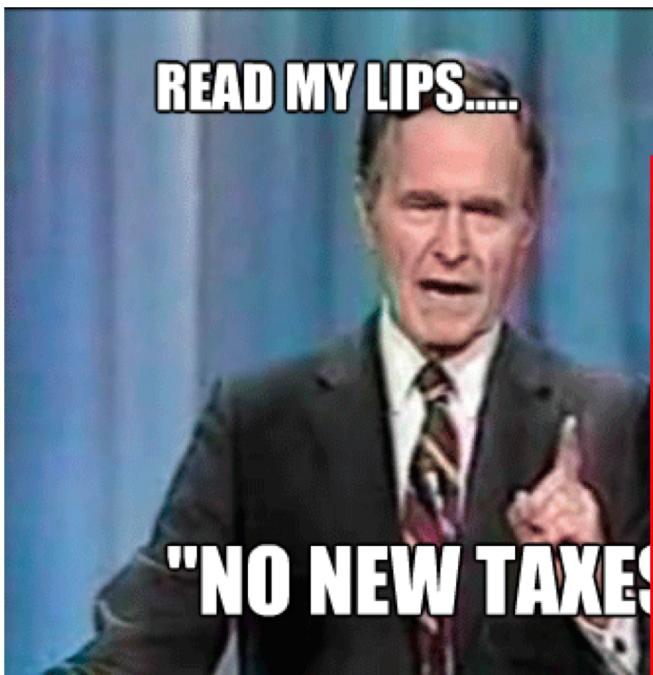
Specific User Needs

Review!

General goals vs. Specific user needs

1. Help people find stuff
2. Help people find movies they like
3. Help people look up actors in films
4. Help people figure out who the leading actor in a movie.

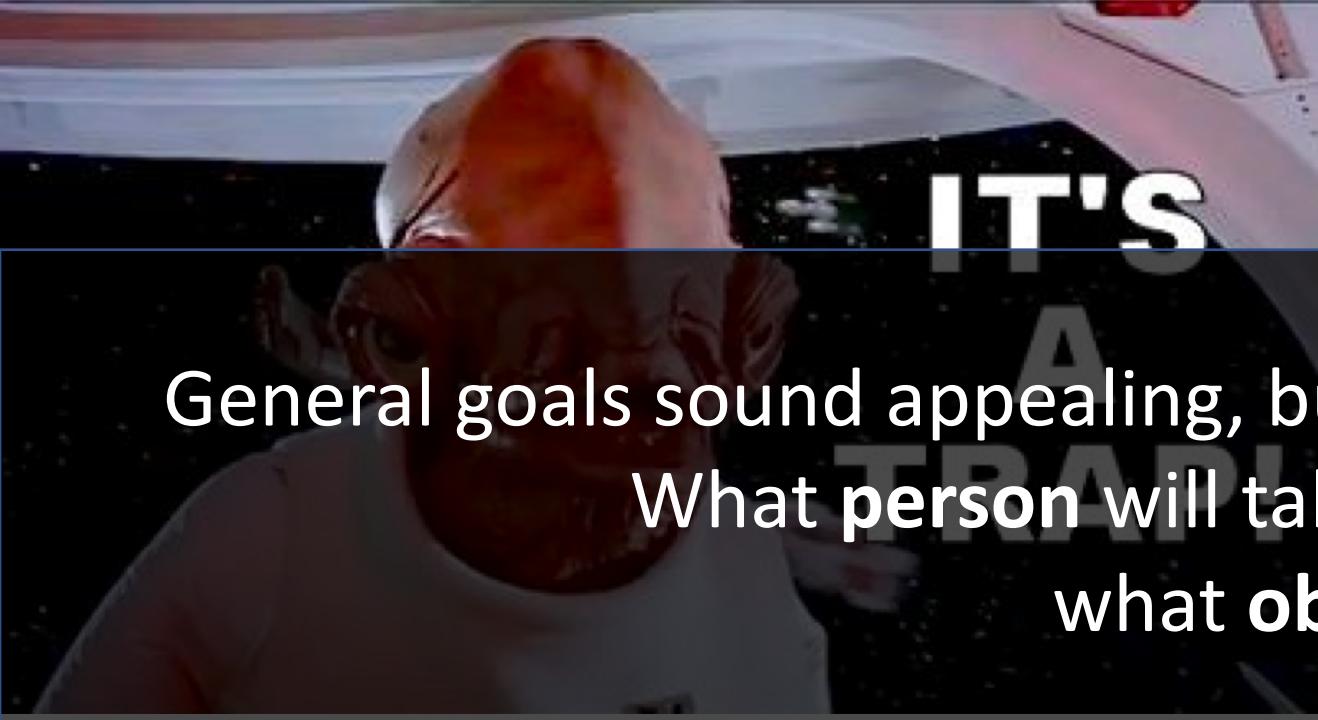
What's appealing about general goals?



General Vs. Specific Goals

Goal 1:
“Clean the house.”

Goal 2:
“Fold that basket of laundry.”



General goals sound appealing, but specific goals are actionable:
What person will take what action on what object?

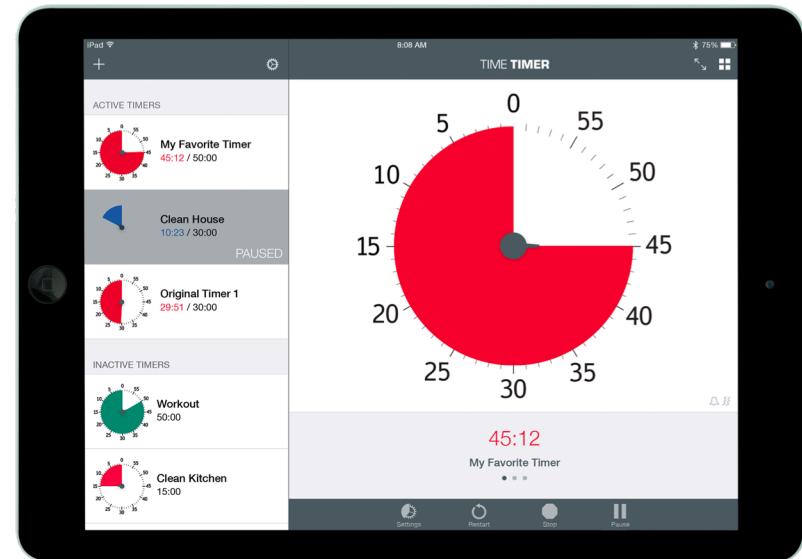


Example: Domain and Specific Need

Domain: conference talks



Specific need: A timer that first counts down the talk time, then counts down the q&a time so the speaker knows if they are on track



Domain



Online shopping

Specific Need

Social Network



Email client

Uncommon books

Harvard students to look up each other's classes

Web-based
No page reload
Never Delete

Generalized to

Clothes,
Food,
Amazon Fresh
Other sellers



Ivy League
US Colleges
Everybody



Chat
GDrive



G Suite

Every application starts with a specific need then **generalizes**.

Domain: conference talks



Specific need: A timer that first counts down the talk time and q&a



Generalization:

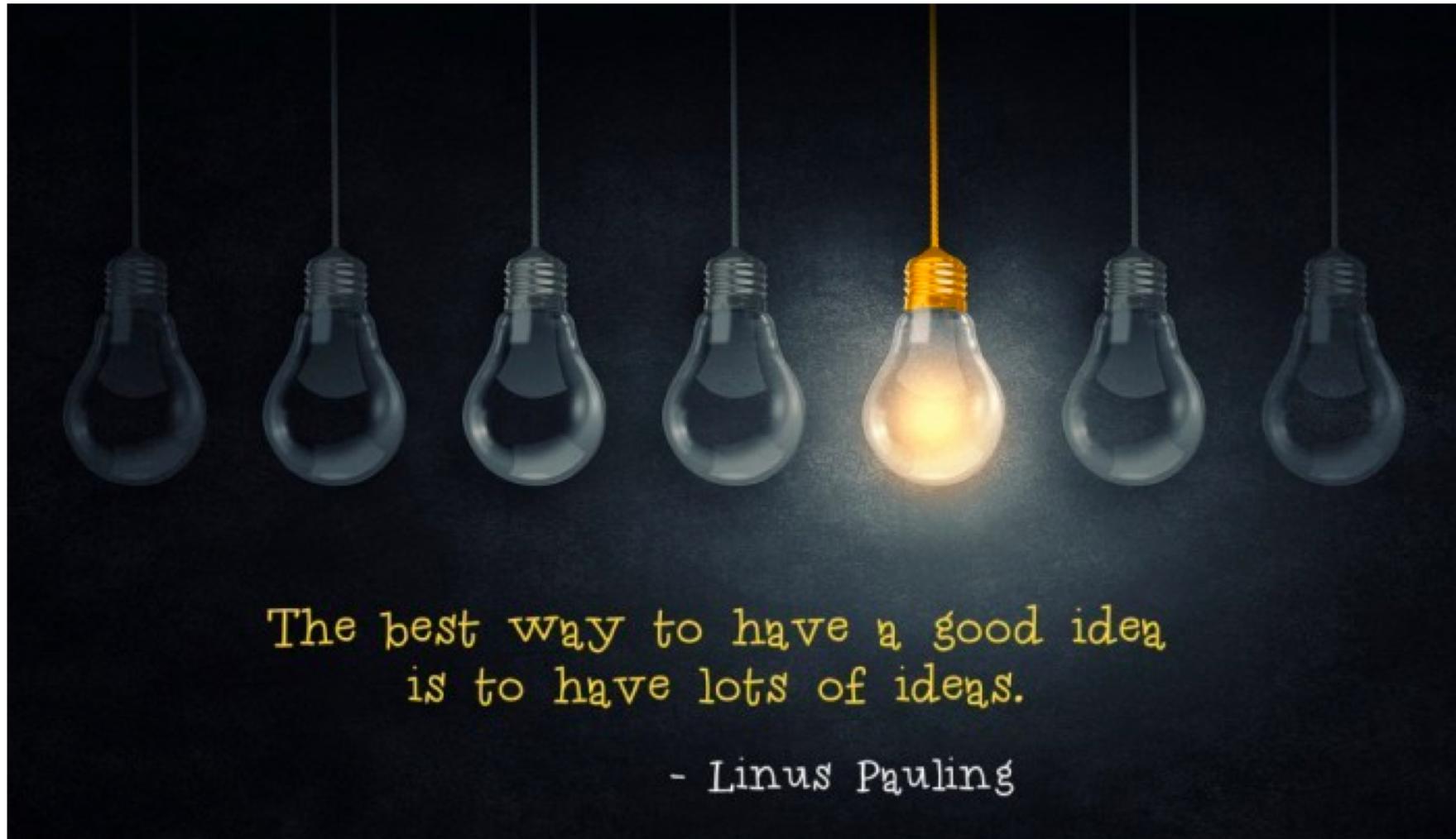
Medium talks (20 min)

Short talks (1 min)
* 40 1-min intros in 1 hr

Long talks (1 hr)
* Might take questions
during the talk.

Brainstorming Specific Needs for IMDB data

Coming up with the perfect idea can be intimidating



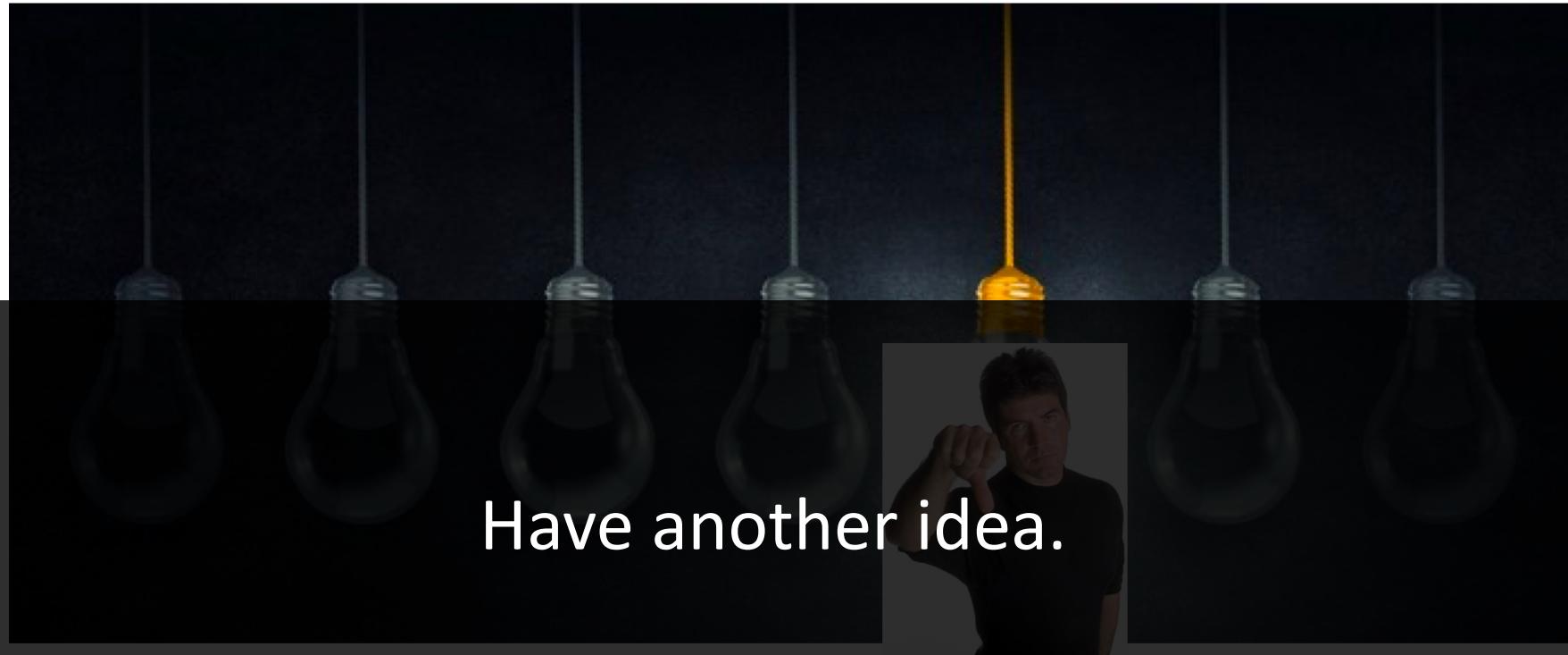
The best way to have a good idea
is to have lots of ideas.

- Linus Pauling

Only rule of brainstorming: **No criticism**



If you HATE someone's idea, what should you do?



Have another idea.

“But IMDB does everything already.”

What are specific user needs of Craigslist that other companies serve better?

craigslist

post to classifieds
my account

search craigslist

event calendar

M	T	W	T	F	S	S
17	18	19	20	21	22	23
24	25	26	27	28	29	30
1	2	3	4	5	6	7
8	9	10	11	12	13	14

help, faq, abuse, legal
avoid scams & fraud
personal safety tips
terms of use new
privacy policy
system status

about craigslist
craigslist is hiring in sf
craigslist open source
craigslist blog
best-of-craigslist
craigslist TV
"craigslist joe"
craig connects

new york city mn h brk que brx stn jsy lgi wch fct

community

- activities
- artists
- childcare
- classes
- events
- general groups
- local news
- lost+found
- missed connections
- musicians
- pets
- politics
- rants & raves
- rideshare volunteers

housing

- apts / housing
- housing swap
- housing wanted
- office / commercial
- parking / storage
- real estate for sale
- rooms / shared
- rooms wanted
- sublets / temporary
- vacation rentals

jobs

- accounting+finance
- admin / office
- arch / engineering
- art / media / design
- biotech / science
- business / mgmt
- customer service
- education
- etc / misc
- food / bev / hosp
- general labor
- government
- human resources
- legal / paralegal
- manufacturing
- marketing / pr / ad
- medical / health
- nonprofit sector
- real estate
- retail / wholesale
- sales / biz dev
- salon / spa / fitness
- security
- skilled trade / craft
- software / qa / dba
- systems / network
- technical support
- transport
- tv / film / video
- web / info design
- writing / editing

services

- automotive
- beauty
- cell/mobile
- computer
- creative
- cycle
- event
- farm+garden
- financial
- household
- labor/move
- legal
- lessons
- marine
- pet
- real estate
- skilled trade
- sm biz ads
- travel/vac
- write/ed/tran

for sale

- antiques
- appliances
- arts+crafts
- atv/utv/sno
- auto parts
- aviation
- baby+kid
- barter
- beauty+hlth
- bike parts
- bikes
- boat parts
- boats
- books
- business
- cars+trucks
- cds/dvd/vhs
- cell phones
- clothes+acc
- collectibles
- computer parts
- computers
- electronics
- farm+garden
- free
- furniture
- garage sale
- general
- heavy equip
- household
- jewelry
- materials
- motorcycle parts
- motorcycles
- music instr
- photo+video
- rvs+camp
- sporting
- tickets
- tools
- toys+games
- trailers
- video gaming
- wanted
- wheels+tires

discussion forums

- android
- apple
- arts
- atheist
- autos
- beauty
- bikes
- celebs
- comp
- cosmos
- diet
- divorce
- dying
- eco
- fbdbk
- film
- fixit
- food
- frugal
- gaming
- garden
- haiku
- help
- history
- housing
- jobs
- jokes
- legal
- linux
- manners
- marriage
- money
- music
- open
- outdoor
- parent
- philos
- photo
- politics
- psych
- recover
- religion
- rofo
- science
- spirit
- sports
- super
- tax
- travel
- tv
- vegan
- words
- writing

english

nearby cl

- albany
- allentown
- baltimore
- binghamton
- catskills
- central nj
- delaware
- eastern ct
- eastern shore
- harrisburg
- hartford
- hudson valley
- jersey shore
- lancaster
- long island
- new haven
- north jersey
- northwest ct
- oneonta
- philadelphia
- poconos
- reading
- rhode island
- scranton
- south coast
- south jersey
- western mass
- williamsport
- worcester
- york

us cities

us states

canada

cl worldwide

gigs

- computer
- creative
- crew
- domestic
- event
- labor
- talent
- writing

resumes

IMDb has lots of data just waiting to meet a specific user need

The screenshot shows the IMDb homepage. At the top, there's a search bar and navigation links for 'Movies, TV & Showtimes', 'Celebs, Events & Photos', 'News & Community', and 'Watchlist'. Below the search bar, there are several movie trailers: 'THE NEXT OSCAR CONTENDER!', 'Peppermint', 'God Bless the Broken Road', 'The Apparition', 'Bisbee '17', and 'Winter Ridge'. A section titled 'Opening This Week' lists movies like 'The Nun', 'Peppermint', 'God Bless the Broken Road', 'The Apparition', 'Bisbee '17', and 'Winter Ridge' with links to 'Get Tickets'. Below this is a 'Get Tickets & Showtimes' button. Further down, there's a 'Now Playing (Box Office)' section with movies like 'Crazy Rich Asians', 'The Meg', 'Mission: Impossible - Fallout', 'Searching', and 'Operation Finale', each with a 'Get Tickets' link. At the bottom, there are sections for 'Our Helpful Hacks to Get You Through TIFF 2018' and 'Back in the Day: Actors' Early Roles'.

This screenshot shows the IMDb movie page for 'Crazy Rich Asians'. At the top, it displays the movie's title, rating (7.6), and release date (15 August 2018). Below the title is a large image of the movie's cast. A 'Get Showtimes & Tickets' button is visible. To the right, there's a sidebar with news articles about the film's connection to the Oscars and its success at the Toronto International Film Festival. The main content area includes sections for 'Videos' (with thumbnail images) and 'Related News'.

This screenshot shows the 'Cast' section of the 'Crazy Rich Asians' page. It lists the main cast members with their character names: Constance Wu as Rachel Chu, Henry Golding as Nick Young, Michelle Yeoh as Eleanor Young, Gemma Chan as Astrid Young Teo, Lisa Lu as Ah Ma, Awkwafina as Peik Lin Goh, Harry Shum Jr. as Charlie Wu, Ken Jeong as Wye Mun Goh, Sonoya Mizuno as Araminta Lee, Chris Pang as Colin Khoo, Jimmy O. Yang as Bernard Tai, and Ronny Chieng as Eddie Cheng. Each cast member has a small profile picture next to their name.

The screenshot shows the 'Storyline' section, which begins with a paragraph about Rachel Chu traveling to Singapore for her boyfriend's wedding. It highlights the secret that Nick is from a wealthy family. Below the storyline is a 'Plot Summary | Plot Synopsis' section, followed by 'Plot Keywords' (nouveau riche, materialism, gold digging, aeroplane, chinaman) and 'Taglines' (The only thing crazier than love is family). The 'Genres' listed are Comedy and Romance. Under 'Motion Picture Rating (MPAA)', it says PG-13 for suggestive content and language, with a link to 'See all certifications'. The 'Parents Guide' also links to 'View content advisory'.

This screenshot shows the 'Details' and 'Box Office' sections. In 'Details', there are links for 'Official Facebook', 'Official Instagram', and 'Country: USA'. The 'Language' is listed as English, Mandarin, Cantonese, Hokkien, Tamil, and French. The 'Release Date' is 15 August 2018 (USA). 'Also Known As' lists 'Crazy Rich Asians' and 'Franchise-Best \$5.4 Million on Thursday Night'. 'Filming Locations' include Langkawi, Malaysia. In the 'Box Office' section, it shows a budget of \$30,000,000 (estimated), opening weekend in the USA (\$26,510,140 on 19 August 2018), and grosses of \$152,233,071 in the USA and \$187,451,904 worldwide. There are also links for 'Production Co.' (Color Force, SK Global, Warner Bros.) and 'Technical Specs'.

Studio Time: 45 minutes



Brainstorm until each of you have 10 specific needs you'd be interested in pursuing

Must mostly use IMDB data to provide additional value to what IMDB already does.
(IMDB already looks up actors and movies.)

What data does IMDB have?

What specific needs do people have around movies?

- Think about different specific groups of people, not just yourself.

Think about the whole experience around movies, not just watching them.

- Finding a movie near you, trying to remember a movie line,

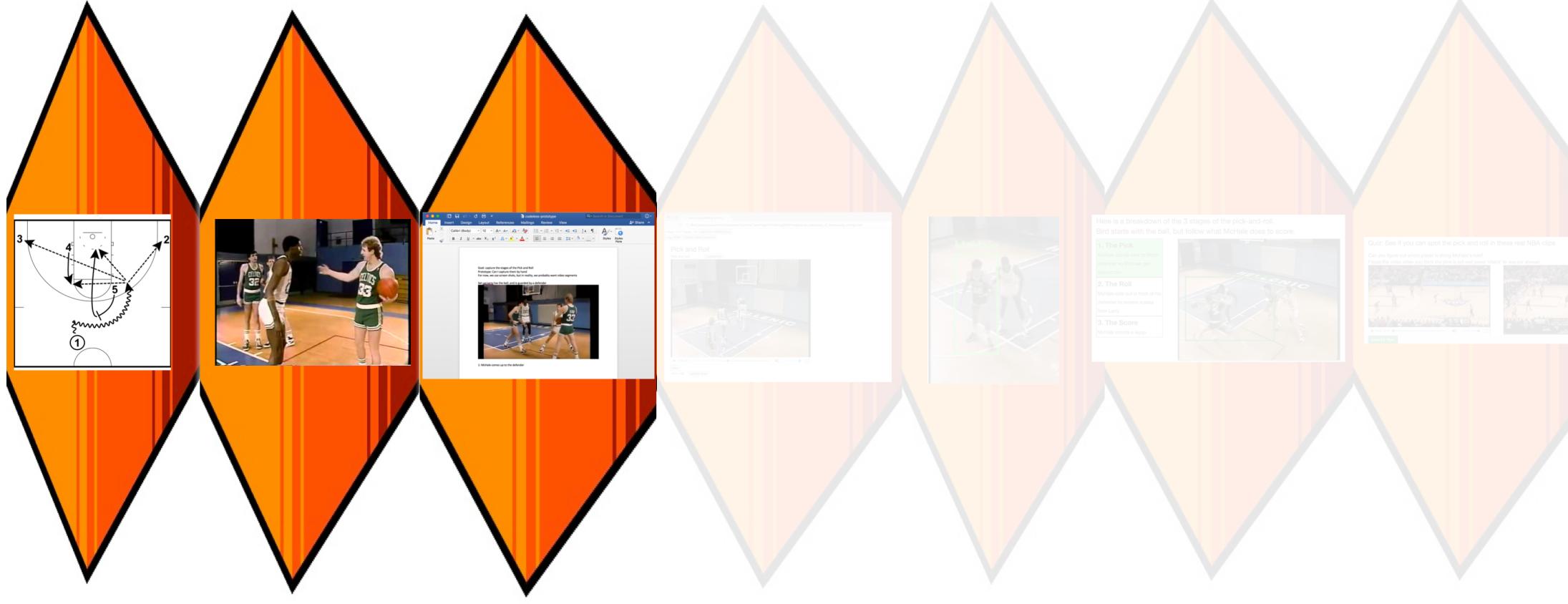
Today by 9pm - post 10 specific user need ideas on Piazza

Next's weeks goal

- Make your own application using IMDB data and CRUD operations.
 - Define your own high level goal: a specific user need to solve
 - Define 7-10 low level goals you will need to achieve this.
 - Functionality is the most important thing.
- Must use **Flask, SQLite**. You **don't have to use SQLAlchemy**
- We have not talked about users yet or session yet. Stay tuned!

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!

Next's weeks goal

- Make your own application using IMDB data and CRUD operations.
 - Define your own high level goal: a specific user need to solve
 - Define 7-10 low level goals you will need to achieve this.
 - Functionality is the most important thing.
 - Create at least 1 paper prototype – test it on at least 1 person.
 - Report one thing you learned from it
 - Graphic design should be GOOD ENOUGH to not repulse people in user tests.
 - Test it on at least 1 person
 - Report on thing you learned
- Must use Flask, SQLite. You don't have to use SQLAlchemy
- We have not talked about users yet or sessions yet. Stay tuned!