Staff

• Prof. Lydia Chilton
  • Office hours: Tuesday 4-5

• TAs:
  • Katy Gero
  • Savvas Petridis

• Course website:
  • http://www.columbia.edu/~lc3251/courses/fall18/
Advanced Web Design Studio

No screens

Prof. Lydia Chilton
COMS 6998
7 September 2018
You already know **front-end web dev**: HTML, JavaScript, Bootstrap, jQuery

And design:
Iterative design, critique

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
Advanced Web Design Studio

No screens

Prof. Lydia Chilton
COMS 6998
7 September 2018
What is a studio class?
Not a studio class
Why we do teach some topics in a studio?

Painting

Architecture

Acting
What are other topics we learn through applying skills and receiving feedback?
What are other topics we learn through applying techniques and receiving feedback?

Sports
Languages
Cooking
In this class, the staff will set high-level goals.

We will support you in achieving them by:
1) setting deadlines
2) providing feedback
3) creating a supportive environment of peers
Grading is largely based on **effort**

In-class participation 20%

Weekly turn-ins 60%

Final Project 20%
Grading is largely based on **effort**

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
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<td>The final project may be done individually or in groups of 2.</td>
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Objectives

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.
User Interface Design Review

Prof. Lydia Chilton
COMS 4170
Users interact with a system to accomplish a goal

Amazon

Google Calendar

Google Maps

Buy a book

Get to events on time

Get to a place
User goals must be concrete.

Grand but not actionable

“combat social inequality”

“bring the world closer together”

“scale and democratize education”
User goals must be concrete.

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<th>Grand but not actionable</th>
<th>Humble but actionable</th>
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<tr>
<td>“combat social inequality”</td>
<td>“register 100 voters in Selma, Alabama”</td>
</tr>
<tr>
<td>“bring the world closer together”</td>
<td>“let Harvard students see what dorm their friends are in”</td>
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<tr>
<td>“scale and democratize education”</td>
<td>“teach my 12-year old cousin Nadia how to multiply fractions”</td>
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User Interfaces should be designed to help users accomplish a goal.

Guide users’ attention

Provide clear actions and feedback.

Allow users to navigate through the system in ways that follow from their goal.
Design is hard because it requires synthesizing many elements that are dependent on each other.
We use iteration to minimize risk by prototyping the riskiest elements first.
You already know **front-end web dev**: HTML, JavaScript, Bootstrap, jQuery

And design:
Iterative design, critique

You will learn **back-end web dev** by:

- Rebuilding IMDB.com
- Rebuilding twitter
- Pursuing your own project
Rebuilding IMDB.com
Get Ready for the Toronto International Film Festival

Visit our Guide to TIFF to learn more about the films we're excited to see. Plus, check out our in-studio interviews, celebrity galleries, mini-guides, and more!

Now Playing (Box Office)

- Crazy Rich Asians
  - $22.0M
- The Meg
  - $10.5M
- Mission: Impossible - Fallout
  - $7.0M
- Searching
  - $6.1M
- Operation Finale
  - $6.0M

See more box office results »
PG-13 | 2h | Comedy, Romance | 15 August 2018 (USA)

This contemporary romantic comedy, based on a global bestseller, follows native New Yorker Rachel Chu to Singapore to meet her boyfriend's family.

Director: Jon M. Chu
Writers: Peter Chiarelli (screenplay by), Adele Lim (screenplay by)
Stars: Constance Wu, Henry Golding, Michelle Yeoh

Get Showtimes & Tickets
In 29 theaters near Newyork NY US (change)

How TIFF Gets the Oscars Right
Find out how the Toronto International Film Festival has become a predictor of Best Picture at the Academy Awards over the years.

Watch now »

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  30 minutes ago | BuzzSugar

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  30 minutes ago | Popsugar

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Remember
Users interact with a system to accomplish a goal

Buy a book

Get to events on time

Get directions
What is the single concrete user goal that best defines IMDB?
Who is that actor??????
Notice:
The way we discover user needs is to observe their actions mechanically

I went to see “Crazy Rich Asians”
I saw and actor I didn’t recognize
Who was really good and had an awesome accent
And I’m like, “Who is he?”

From a concrete instance, it is the designers' job to abstract the general need appropriately.
For next week:
Remake the **basic functionality** of IMDB.com

- Must use Flask (web server) back end
- HTML, JavaScript, jQuery, Bootstrap
- Must have multiple pages
- Must serve data from the server

- **NO** static HTML data to display data
- **NO** Database
- **NO** images
- **NO** graphic design
Creating multiple pages in Flask (web server)

```python
from flask import render_template, request, jsonify
from app import app, models, db
from app.models import Movie

@app.route("/")
def home():
    m = Movie.query.all()
    return render_template('home.html', movies=m)

@app.route("/movie/<id>")
def movie(id):
    movie_data = Movie.query.get(id)
    return render_template('movie.html', movie_data = movie_data)

@app.route("/addMovie")
def addMovie():
    return render_template('addMovie.html')

@app.route("/saveNewMovie", methods=['POST', 'GET'])
def save():
    #cur = mysql.connection.cursor()
    #how do I get the data from post?
    send_back = {"status": "failed"}
    if request.method == 'POST':
        data = request.args
        data = request.get_json(force=True)
    newMovie = Movie(title=data["title"], year=data["year"])
    db.session.add(newMovie)
    db.session.commit()
    send_back["status"] = "success"
    return jsonify(send_back)
```
To remake the **basic functionality** of IMDB.com
What goals should we define?

- **High-level user goal:**
  - ???

- **Low-level dev goals:**
  - ?
  - ?
  - ?
  - ?
  - ?
  - ?
  - ?
Possible Goals for remaking IMDB.com

• High-level user goal:
  • **Allow a user to look up the main actors in a movie.**

• Low-level dev goals:
  • Install Flask – get a “hello world” page up and running
  • Make two different webpages
  • Page 1 - List all movies
  • Page 2 – See the details of one movie
  • When you click on a movie on Page 1, it takes you to that movie page
  • Make a page to create a new movie
  • Make a page to update a movie
  • Make a button to delete a movie
Turn-in a document describing the following:

1. Establish goals.
One high level goal and 7-10 low-level goals that will help you accomplish the high level goal.

2. Iteration.
Report on 3 of the features in your that caused you to iterate on your goals.
1. My plan was to ___x____.
2. But I ran into problem ___y____.
3. And I solved it by doing ___z____.
   z = “I added a new subgoal”, “I changed my high level goal”, “I removed a subgoal”

For each of the goals in part 1. Which items you completed? Which items you did not complete?
Show images to document each item. (either of the UI or code)

Be prepared to discuss your progress during studio.

You will be graded on whether or not you did each part.
Summary
You already know:
Front-end web dev, iterative design, critique

You will learn:
Back-end web dev

And practice web design by:
• Rebuilding IMDB.com
• Rebuilding twitter
• Pursuing your own project
• Giving and receiving critique
This is a **studio class**.
We practice web dev and learn from experience.

Like this:

Not this:
Objective 1.
Master front-end and back-end technologies for making interactive websites
Objective 2.
Discover specific user needs by developing a low-level, mechanical model of human behavior.

I went to see “Crazy Rich Asians” I saw and actor I didn’t recognize Who was really good and had an awesome accent. And I’m like, “Who is he?”

From a concrete instance, it is the designer’s job to abstract the general need appropriately.
Objective 3.
Practice Iterative design.

Idea:
Help NBA fans recognize the pick-and-roll during games.
Iterative design is equally important when rebuilding apps
For next week:
Remake the **basic functionality** of IMDB.com

- Must use Flask (web server) back end
- HTML, JavaScript, jQuery, Bootstrap
- Must have multiple pages
- Must serve data from the server

- **NO** static HTML to display data
- **NO** Database
- **NO** images
- **NO** graphic design
Turn in by 2pm Friday:

1. Establish goals.
   One high level goal and 7-10 low-level goals that will help you accomplish the high level goal.

2. Iteration.
   Report on 3 of the features in your that caused you to iterate on your goals.
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   \[ z = \text{"I added a new sub-goal", "I changed my high level goal", "I removed a sub-goal"}

   For each of the goals in part 1. Which items you completed?
   Show images to document each item. (either of the UI or code)

Be prepared to discuss your progress during studio.

You will be graded on whether or not you did each part.

   Late work cannot be accepted.
   Turn in whatever you have by 2pm to get credit.