

# CSE 193 + ERSP

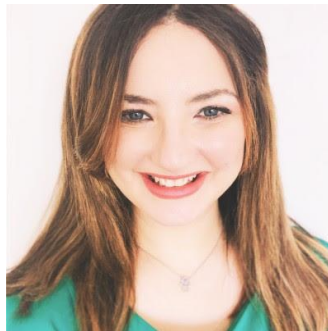
Fall 2021



# Meet the Team!



Christine Alvarado, Ph.D.



Mai ElSherief, Ph.D.



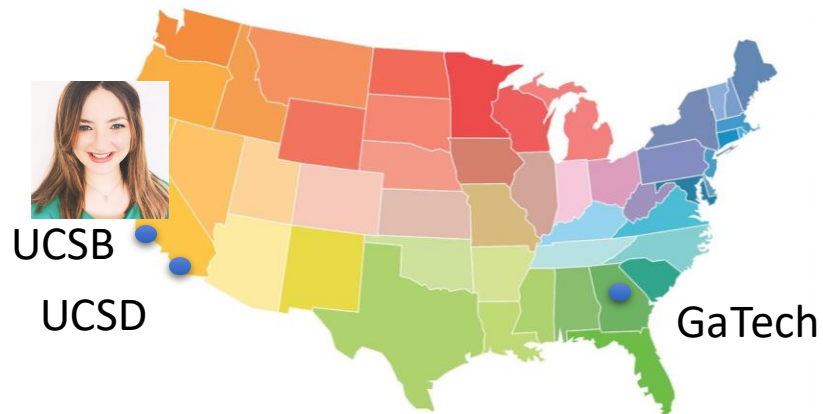
Vaidehi Gupta

# Christine Alvarado, Ph.D.



- My professional history
- My personal life
- My research history...

# Mai ElSherief, Ph.D.



**Research Area:** Social Computing, NLP

Online Hate  
Language

Gender  
Biases

Online  
Falsehoods



**Working with undergraduate and grad. students**

**Hobbies:**



Cooking



Outdoor



Weight Training



# Vaidehi Gupta



We strive to be an *inclusive* community  
(CS in general is not always)



# Structural Barriers

- Black students are less likely than White students to have **classes dedicated to CS** at the school they attend (47% vs. 58%, respectively).
- Black (58%) and Hispanic (50%) students are less likely than White students (68%) to **use a computer at home** at least most days of the week.

Google. *Diversity Gaps in Computer Science: Exploring the Underrepresentation of Girls, Blacks and Hispanics*  
<https://services.google.com/fh/files/misc/diversity-gaps-in-computer-science-report.pdf>



# Social Barriers

- Female students are less likely than male students to be aware of **CS learning opportunities**.
- Male students are more likely to be told by a parent or teacher that they would be **good at CS**
- Black, Hispanic and female students are less likely to see media representations of people doing CS that **look like them**.

Google. *Diversity Gaps in Computer Science: Exploring the Underrepresentation of Girls, Blacks and Hispanics*  
<https://services.google.com/fh/files/misc/diversity-gaps-in-computer-science-report.pdf>





# Getting to know YOUR research group!

W0 Thu Class: Introduction to the course, ERSP and each other (class resources)



Topic: Introduction to the course, ERSP and each other

Note: This is the standard format for all "participation assignments" and how we will track your participation in class. These assignments will list links to class materials and everything else you should need during class time.

Slides: TBA

Research groups: <https://docs.google.com/spreadsheets/d/1OC3kEeC-Bzv2t2EemwO5olZQtmrmqZvd-c1sGrKVWmE/edit#gid=0>

ERSP Contract (will be handed out in class): [CSE Early Research Scholars Contract.pdf](#) ↓

Research Consent Form (will be handed out in class): [Approved Consent 2021.PDF](#) ↓

Letters from Past Participants:

<https://drive.google.com/drive/folders/1NzY9QMrMHC2B90x9CDphUbFwCnkmRe-i>

Research Video: <https://drive.google.com/file/d/1wG0kyzffv5QhS1nByULYCgC3o-t0WaiY/view>

While you watch the video write down any questions you have. We will stop periodically to discuss them.

Preferred  
Name  
pronouns  
[Ajorpaz/Tullsen]

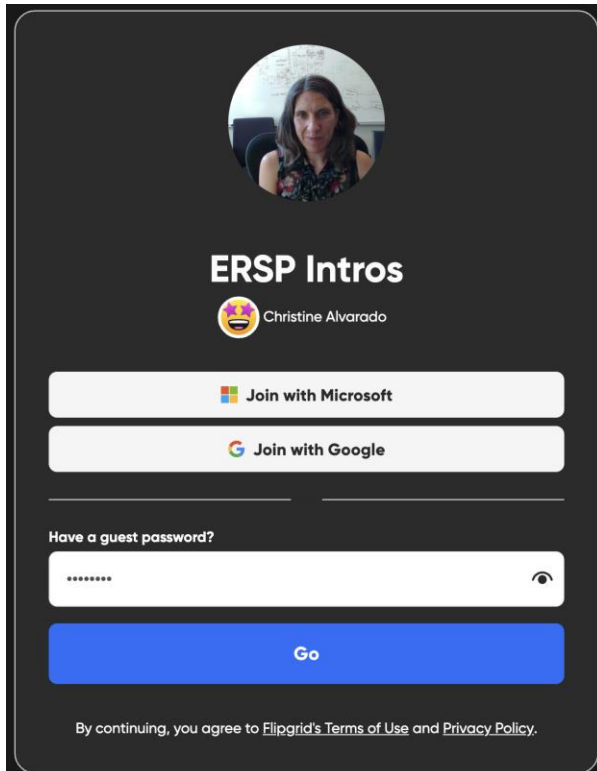
Research group. E.g.:  
[Ajorpaz/Tullsen: Reverse  
Engineering Modern CPUs to  
Identify Security Vulnerabilities]

With your research group members:

- First, introduce yourself!
- Then discuss:
  - Where have you seen **bias or barriers** affect students from underrepresented groups (race, gender, ability, etc) in CS?
  - Have these barriers ever **affected** you personally? If so, what would you **want people to do** to help remove these barriers?
  - What can **you** do to help remove these barriers?



# Getting to know your fellow ERSPers!

A screenshot of a Flipgrid login page titled "ERSP Intros". At the top is a circular profile picture of a woman. Below it, the text "ERSP Intros" is displayed, followed by a small emoji icon and the name "Christine Alvarado". There are two large buttons: "Join with Microsoft" and "Join with Google". Below these is a section titled "Have a guest password?" with a password input field (masked with dots) and a "Go" button. At the bottom, a small line of text states: "By continuing, you agree to Flipgrid's Terms of Use and Privacy Policy."

- Follow the link
  - <https://flipgrid.com/c6a5233d>
  - Password: ERSP 2021
- Spend some time looking at the videos that your classmates have uploaded

# Class Etiquette

- Be on time
- Come prepared (do all work before class)
- Participate actively in class activities (NO multitasking)
- Respect and listen to others
- **Have patience, compassion and understanding**
  - It's a difficult time. I understand that technology issues, family issues, stress, etc. can interfere. I will work with you. I only ask that you stay engaged and do your best.

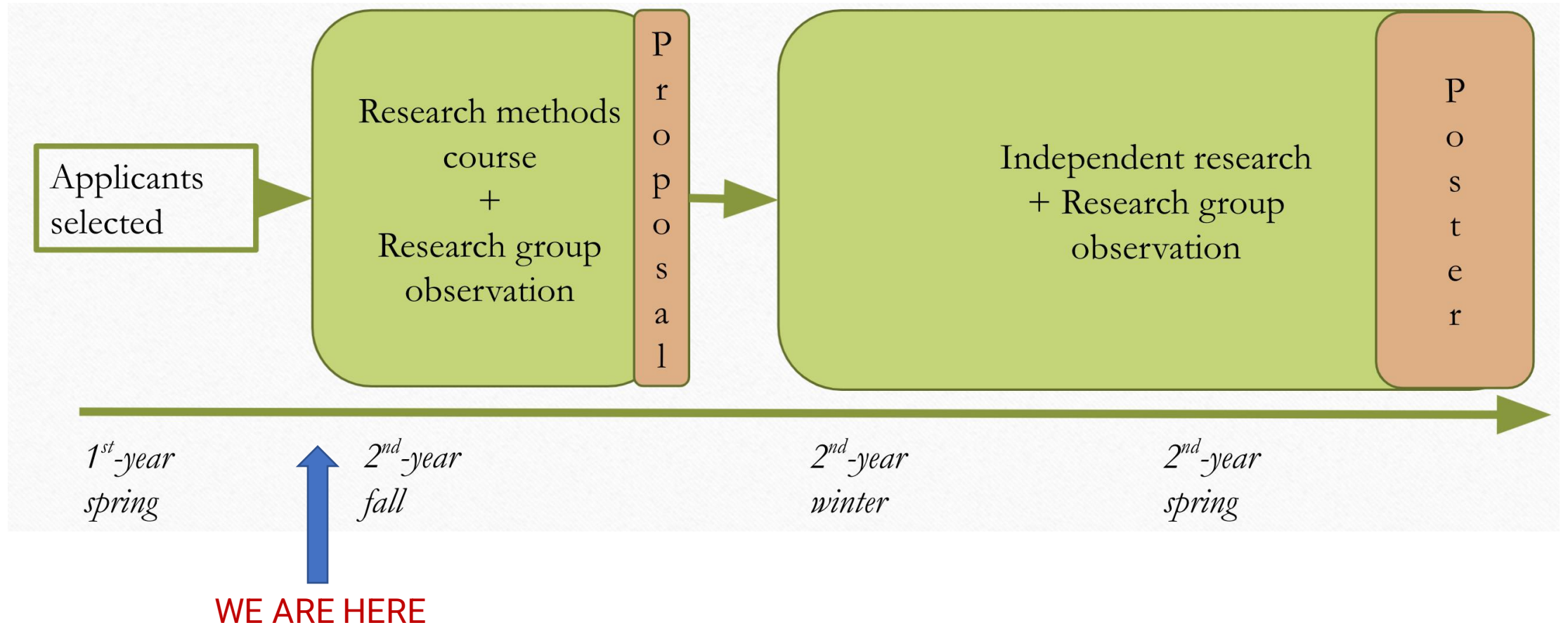


# Class Etiquette (in-class)

- Wear your mask over your nose and mouth at all times
- Remind us of your name/pronouns until we call on you by name. (It might take awhile...)



# ERSP: Program Overview



# Structure of the Course

## Coursework

HW Assignments

Logs

Participation

Research Group Meeting Attendance

Research Group Contribution

Content/Tweet Creation

Project Proposal

Final Presentation

▼ Week One : Logs and Group Work		✓	+	⋮
⋮	W1 Tue Pre-class Assignment: Intros, Log Set up and Initial Reflection Oct 6   2 pts	✓		⋮
⋮	W1 Tue Class: Group Work and Team Building Oct 6   2 pts	✓		⋮
⋮	W1 Thu Pre-class Assignment: Research Paper Prep and Initial Group Meeting Oct 8   2 pts	✓		⋮
⋮	W1 Thu Class: Reading a Research Paper Oct 8   2 pts	✓		⋮
⋮	Week 1 Research Log Update Oct 8   2 pts	✓		⋮



# Structure of the Course

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	Oct 6   2 pts			
⋮	W1 Tue Class: Group Work and Team Building	✓		⋮
	Oct 6   2 pts			
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	Oct 8   2 pts			
⋮	W1 Thu Class: Reading a Research Paper	✓		⋮
	Oct 8   2 pts			
⋮	Week 1 Research Log Update	✓		⋮
	Oct 8   2 pts			



# Structure of the Course

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W1 Thu Class: Reading a Research Paper Oct 8   2 pts	✓		⋮
Week 1 Research Log Update Oct 8   2 pts	✓		⋮





# Structure of the Course

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## Coursework

HW Assignments

Logs

Participation

Research Group Meeting Attendance

Research Group Contribution

Content/Tweet Creation

Project Proposal

Final Presentation

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Week Two : Reading Research Papers		✓	+	⋮
Week 2 Research Log Update	Oct 15   2 pts	✓		⋮
W2 Research Group meeting attendance	Oct 16   3 pts	✓		⋮



# Group Meetings per Week



# Attending Research Group Meetings

- In both group meetings and in class, we will take attendance
- In class, Vaidehi will take attendance
- In research group meetings YOU will take attendance
  - Each week one group member will enter the attendance for all of their group members into a shared google document.
  - Your group is responsible for designating an attendance recorder each week. Start with one person. Switch midway through the quarter.



# Structure of the Course

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## Coursework

HW Assignments

Logs

Participation

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Research Group Contribution

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Final Presentation

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# Contract Grading

## An accomplishment-based grading scheme

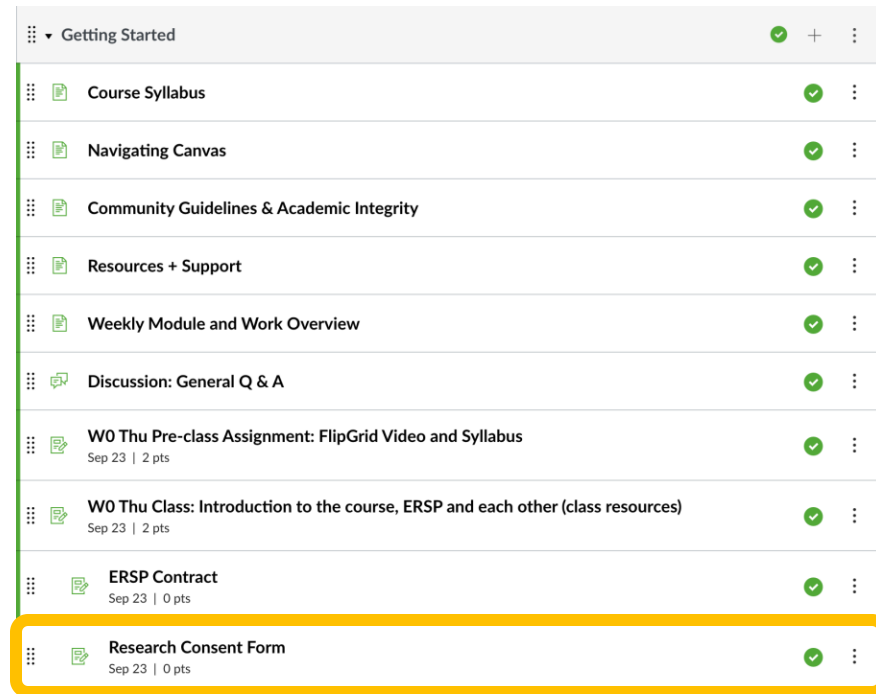
To get an A:

- **Class participation and Punctuality**: No more than 1 Absent/Not Participating grades
- **Research group meeting attendance**: No more than 1 Absent/Not Participating grades
- **Logs**: At least 9 Complete logs and no logs Not Done
- **Content Creation/Tweets**: At least 8 Engaging tweets and none Not Done
- **HW Assignments**: At least 13 Complete and no Not Done HW assignments
- **Research Group Contribution**: Healthy research group contribution
- **Final Project Proposal** and **Final Presentation**: High Pass on Final Project Proposal and Final Presentation

[Check the Syllabus on Canvas for more info...](#)



# Current Research: Educational Programs



Getting Started	✓	+	⋮
Course Syllabus	✓		⋮
Navigating Canvas	✓		⋮
Community Guidelines & Academic Integrity	✓		⋮
Resources + Support	✓		⋮
Weekly Module and Work Overview	✓		⋮
Discussion: General Q & A	✓		⋮
W0 Thu Pre-class Assignment: FlipGrid Video and Syllabus Sep 23   2 pts	✓		⋮
W0 Thu Class: Introduction to the course, ERSP and each other (class resources) Sep 23   2 pts	✓		⋮
ERSP Contract Sep 23   0 pts	✓		⋮
Research Consent Form Sep 23   0 pts	✓		⋮

- This is one of the programs Prof. Alvarado studies.
- Your rights and activities as part of the “study”:
  - Informed consent (read and sign forms now, one copy to turn in, one copy for you)
- We hope you will give this consent, but you are not required to do so.

**Soft copy** on Canvas and **handout** during class

# Your Responsibilities in this Course (and ERSP)

Getting Started	✓ + ⋮
Course Syllabus	✓ ⋮
Navigating Canvas	✓ ⋮
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# Your Responsibilities in this Course (and ERSP)

- **Participate** in the ERSP program actively and fully for the full year of the program. Each quarter you are expected to register for the course associated with the ERSP program as instructed and to complete all work associated with that course.
- **Work** (at least) the expected number of hours weekly
- **Attend** class and group meetings regularly and punctually (starting next week?)
- **Complete** the assigned work for this course in a timely fashion, and to "pull your weight" with all assigned group projects.





# Your Responsibilities in this Course (and ERSP)

- **Behave** professionally toward your group members and the faculty and students who comprise the research group you are placed with.
- **Keep** an open line of communication between yourself, the members of your group, and Profs Alvarado/ElSherief. In particular, you must let us (Prof. Alvarado/ElSherief) know if any issues arise, as soon as they arise.
- **Balance** your time so as to maintain success in your other courses, as well as in the ERSP program.



# Your Responsibilities in this Course (and ERSP)

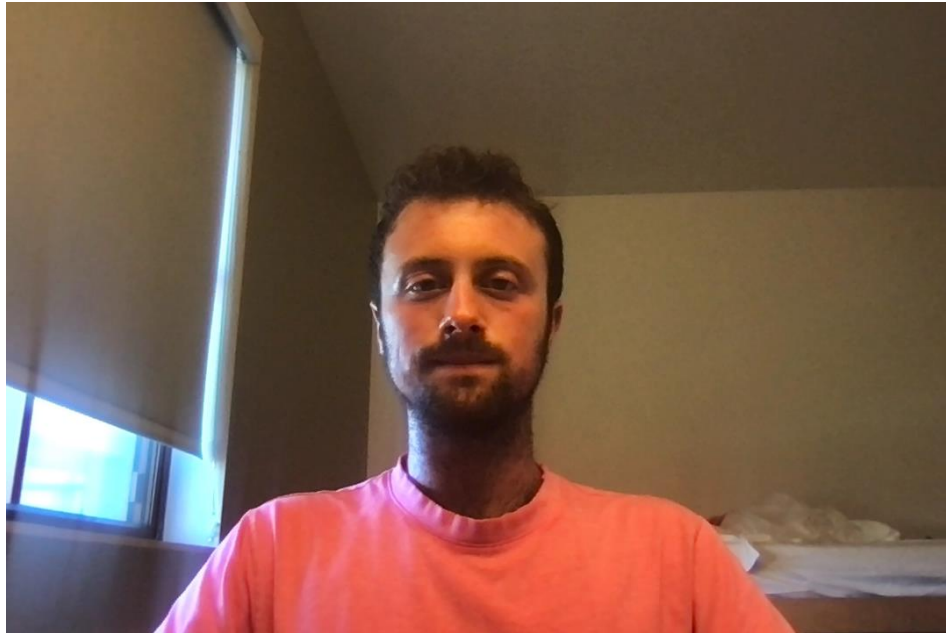
- **Attend** every week's class period, on time, and participate actively in these class sessions.
- **Attend** all group research meetings, on time, every week.
- **Complete** all of the assigned pre-class activities *before* class time. (Next Tuesday's pre-class activity is posted)
- **Spend** 12 hours/week (minimum) on this course/program



# Break Time!



# Past ERSP students: Andrew Gaut



**Andrew Gaut**  
ERSP@UCSB -- 2019

UCSB ERSP → ACL 2019 → ACL 2020 → Stanford Ph.D. program

**Sun, Tony, Andrew Gaut, Shirlyn Tang, Yuxin Huang, Mai ElSherief, Jieyu Zhao, Diba Mirza, Elizabeth Belding, Kai-Wei Chang, and William Yang Wang.** "*Mitigating gender bias in natural language processing: Literature review.*" ACL 2019

**Gaut, Andrew, Tony Sun, Shirlyn Tang, Yuxin Huang, Jing Qian, Mai ElSherief, Jieyu Zhao et al.** "*Towards understanding gender bias in relation extraction.*" ACL 2020

# Advice from Previous ERSPers

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✓ Published Edit ⋮

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Research Video: <https://drive.google.com/file/d/1wG0kyzffv5QhS1nByULYCgC3o-t0WaiY/view>

While you watch the video write down any questions you have. We will stop periodically to discuss them.

- In your research log, write a written response that includes the following:
  - What is your **initial reaction** to these letters?
  - What are the **themes** you see in these letters?



# ERSP Themes from Advice Letters



# Understanding Research: Video of a Research Talk



Assistant Professor, UC San Diego

[Talk: Designing the User Experience of Machine Learning](#)

- **Watch** the talk. Anytime you have a **question**, write it down.
- I'll stop the video every few minutes and we'll answer these questions. I'll also ask you some more. Don't be shy!



# Understanding Research: Video of a Research Talk



Assistant Professor, UC San Diego

[Talk: Designing the User Experience of Machine Learning](#)

- What were the **elements of research** that you saw in the video?
- What **surprised** you? Is this what you expected research to be?
- What was the most **confusing** aspect? What questions do you still have?
- How do you think this **compares** to what you'll see in your group meetings?
- Looking ahead: What **problems** did the presenter face and solve? Can you articulate these problems at different levels?





# Assignment for Next Tuesday

**On Canvas now**



# For Next Time

- **Group assignments** coming soon (over the weekend or by Tuesday)
- Please keep an open mind toward the **research area**.
- Everyone should **attend meetings** starting next week, if possible, or latest by week 2.



# Backup Slides



# Past ERSP students: Tony Sun



UCSB ERSP → Amazon Alexa → Google Research → Stanford Ph.D. student

