



What is CS Research?

CSCI 16: Intro to the CS Research Process
1st Meeting, Tuesday, January 3, 2023

Kelly Shaw

Attribution



Except where otherwise noted, ERSP and all associated resources were developed by Christine Alvarado, UC San Diego, Department of Computer Science and Engineering.

These slides were originally jointly developed by Christine Alvarado and Mai ElSherief. They have been adapted by Kelly Shaw for CSCI 16 at Williams College.



This work is licensed under the Creative Commons Attribution 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by/4.0/>.

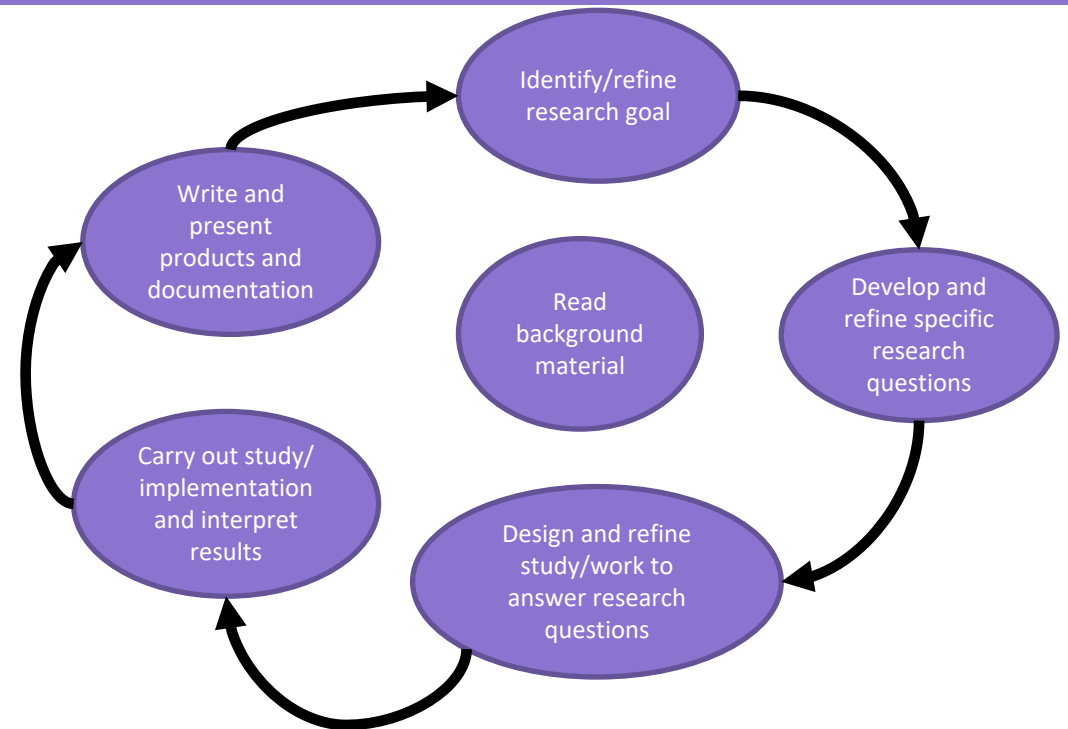
Today's Plan

- Introductions
- Course objectives and details
- Research video
 - [SleepGuru: Personalized Sleep Planning System for Real-life Actionability and Negotiability](#)
- Read and discuss
 - [The five keys to a successful Google team](#)
- Read
 - [How to Read an Engineering Research Paper](#) by William Griswold



Introductions

Course Objectives



- Learn the basics of CS research
 - How to critically read a research paper
 - How to do a literature search
 - How to evaluate an experimental framework
 - How to analyze results
 - How to formulate and describe a research problem
 - How to propose a solution to a research problem
 - How to design an evaluation plan

Course Details

■ Meetings

- Wachenheim 002
- T/W/Th 10-11:50

■ Course materials

- On [Glow](#)

■ Final paper and presentation

- Group of 1-3 students will create written research project proposal due 1/26
- 10-15 minute presentation of research proposal in-class on 1/26

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...)



Understanding Research: Video of a Research Talk



PhD student at POSTECH

[Talk: SleepGuru: Personalized Sleep Planning System for Real-life Actionability and Negotiability](#)

- **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



PhD student at POSTECH

[Talk: SleepGuru: Personalized Sleep Planning System for Real-life Actionability and Negotiability](#)

- 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?
- What **new problem** did the researchers look to solve as compared to prior solutions?
- What **challenges** did the researchers face and solve? Can you articulate these challenges at different levels?



Break



Read and Discuss

- [The five keys to a successful Google team](#)



Read

- [How to Read an Engineering Research Paper](#) by William Griswold