

Research Methods in computer science

Spring 2023

Lecture 2

Omprakash Gnawali

January 23, 2023

Class Introduction

Introduction

Name

Research Topic/Group/Advisor

Year(s) at UH

Undergrad institution/country/city

Topics for today

PhD and Research

What skills do we need to be successful?

Get a PhD.

Get a job.

The concept of deliberate practice

Computer Science Research

It is a little different from what that wikipedia article says

We build new artifacts

What are the desirable properties?

How does it perform?

How well does it solve the problem?

Closer to engineering than natural sciences

Practical Process of Getting a CS Ph.D.

Generate papers?

Need N papers to graduate??

Create new technology that will change the way we do things

Describe your technology in a paper

Paper is not the goal. It is a vehicle for communication and dissemination.

Skills

What skills do we need to do research?

How to create knowledge?

(Practical) How to produce output such as:
paper/presentations/software?

Frequent Practice

You may write just a few papers during your PhD.

Not enough practice to be a good writer.

You may do just a few conference/external audience presentations during your PhD.

Not enough practice to be a good presenter.

You may think you have infinite time to write your paper.

Not a good environment to learn to be productive.

We will try to address these issues in this course.

Assignment 1

Please describe two topics of interest in Computer Science, one in your area of research and one related to the metaverse. Each paragraph must have:

Title

Clear and short explanation of the topic, understandable to a **broader** CS audience.

Reason why the idea is interesting