Research Methods
in computer science
Fall 2021

Lecture 13

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Agenda

Paper expectation

Idea generation

HW6

Paper Expectations

Readers and reviewers set expectations

What are they?

Fair and unfair expectations.

Claims

Is the claim articulated clearly?

Is the claim specific enough?

Evidence

Is there evidence supporting the claim?

Is the evidence credible?

Often just from the title,
we set expectations for the paper.

It can be positive:
efficiency in reading and reviewing

In-class group activity

Pick a paper

Identify the claims

Evaluate the quality of evidence supporting the claim

Generating Research Ideas

"Standing on the shoulders of giants"

Most ideas may not be new

New may be subjective

Adding a layer to an existing deep learning architecture

When is it new?

When is it not new?

Idea Generator Heuristics

Combination / Hybrid techniques

    From the same discipline

        (e.g., ...)

    From a different discipline

        (e.g., ...)

Address Gap/limitation (Incremental?)

    Handle some cases that were not handled

    Improve some (partial) aspects of dimension

Apply different datasets / settings / contexts

In-class group activity

Pick a paper

Generate a derivate idea

HW6

Introduction

Consider the questions we discussed

Related Work

Build on what you have already done in HW3