

Research Methods in computer science

Spring 2020

Lecture 17

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Agenda

Paper Expectations

Conference Updates

Generating Ideas

Assignment

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

Lets discuss expectations
for the following paper ideas

A new algorithm that translates English text to Spanish.

A new wireless networking technology.

A new algorithm that can identify the person in an image.

A new type of user manual to assemble
furniture at home.

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

Old HW7 – In Class Activity

Idea Generation

Pick an important paper in your area of research.

Consider three different ways to generate research based on the paper you picked and generate one idea per technique.

Explain the heuristics and demonstrate how you use the heuristics to create a new ideas.

New HW7

System (Design)

Describe your system or approach in about one page.