Research Methods
in computer science
Fall 2013

Lecture 3

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Agenda

Anatomy of a research paper

Types of papers

Assignment

Communicating Research Outcome

Why is it important?

What is your proposal?

How is it better?

    Prior work

    Experiments

Anatomy of a Research Paper

Abstract

Introduction

Related Work

Design and Implementation

Evaluation

Conclusion

Research Formulation Recap

What are you trying to do? Articulate your objectives using absolutely no jargon.

How is it done today, and what are the limits of current practice?

What's new in your approach and why do you think it will be successful?

Who cares?

Heilmeier

Research Formulation Recap

If you're successful, what difference will it make?

What are the risks and the payoffs?

How much will it cost?

How long will it take?

What are the midterm and final "exams" to check for success?

Heilmeier

How do the answers to these questions map to the different parts of a paper?

Types of Papers

Technical Reports
    Project description
    Research paper

Conference

Journal

Magazine

Find out what type your group and community writes.

Which papers are more important?

Conference

Journal

Magazine

What makes a paper more important than others?

Assignment 2

Create your personal webpage incorporating feedback from today.

Pick ten papers in your area of research and visualize the structure of those papers (sections, section lengths, and any other aspect of the paper) on a single diagram/graph. Conclude with a one paragraph summary.

Summarize the CTP comparison results in a single diagram/graph. Dataset is available on course website. Conclude with a one paragraph summary.

Assignment 3

Write one-paragraph summary of the proposed project.

Write a paragraph addressing each "Research Formulation" questions. The complete writeup should not be longer than two pages.