

# THE RESEARCH PROPOSAL

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# The Purpose of the Research Proposal

- Typically, the amount of money and resources available to an institution or company limits the amount of research projects that can be carried out.
- The purpose of a **research proposal** is to convince a funding agency to support your research project, rather than other possible research projects that are proposed.

# The Purpose of the Research Proposal

- A research proposal should convince others that the research
  - addresses an important question/issue and is therefore *significant* and *necessary*
  - can successfully be carried out by the individuals proposing it
    - Do individuals demonstrate knowledge of background and related work?
    - Are methods clearly described?
    - Do individuals have a track record in this or similar areas?

# Research Proposal Outline

- Abstract
  - A concise summary of the research, containing background, significance, and proposed methods, in no more than 150 words
- Background and Significance
  - Significance: Why is the proposed work important and needed? Clearly state the objective of the proposal. What, specifically, will be accomplished? List any hypotheses, if applicable.
  - Background: What does the reader need to know to understand the proposed research? Even if the proposal is read by a computer scientist, not all computer scientists have the same background.

# Research Proposal Outline (continued)

- Methodology
  - How will the research be carried out? What equipment/tools are necessary?
  - What is the timeline for the proposed work?
- Statement of Qualification
  - Why are you qualified to carry out the proposed research?
  - Qualifications should be as specific as possible (“In the Database and Design course...”)
  - You can also include “general” qualifications (“As a senior majoring in Computer Science...”)
  - For this proposal, you may indicate your personal interest in the research and why it will advance your academic / career goals

# Research Proposal Outline (continued)

- Expected Outcomes
  - What are the expected outcomes of the proposed work?
    - What do you expect to find or learn?
  - What tangible objects will be produced? Software? Research Paper? Poster?
- Bibliography (use IEEE format)
  - List of references cited in your proposal
  - Your proposal should contain references for at least 6 **research** articles, and may contain more.