

# Introduction to Research in Computer Science

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# The Ways of Research ...

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Research as a Journey and a Goal


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- Purposes of Doing Research
- Journeys and Goals?
- Characteristics of Research


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# Purposes of Doing Research

- This has two contexts
  - Why are you doing this study... and
  - ...Why do this particular study?
- The answers to these questions will help inform your planning of the research


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# Journey or Goal?

- Research usually involves making some form of contribution to knowledge - this is often interpreted as the goal or product
- However, the research process involves the acquisition of skills and insight through reflection, and for some it involves a revolution in the person's personal philosophy - this could be viewed as a journey or process
- So which should you concentrate upon?

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# "It is far better to travel in style than to arrive"

- Research is a journey as well as a goal
- It is frequently a journey into the unknown, one that may require first getting lost in order to find the correct way out ...

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## Starting The Research Process

- At the start of the research process it is more valuable if you are prepared to get lost in the literature and questions that emerge, rather than taking with you a map of preconceived ideas.
- You may also benefit personally in your approach to other issues by experiencing this.

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## Completing The Research

- Of course the goal becomes increasingly important towards the end of the research process
- It is more identifiable ...
- and there is more certainty upon which to base the thesis

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## To discuss ...

- Why are you doing this study?
- and why do this particular study?

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## Characteristics

- Research involves:
  - gathering new data, or using existing data for new purposes
  - building a new artifact and exploring its properties
- It is directed towards the solution of a problem, (which can be clearly defined)
- It follows a carefully designed process
- placing emphasis on the development of theories or discovery of general principles
- Research must be logical and defensible
- procedures, data collected and conclusions reached should be validated and carefully reported

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