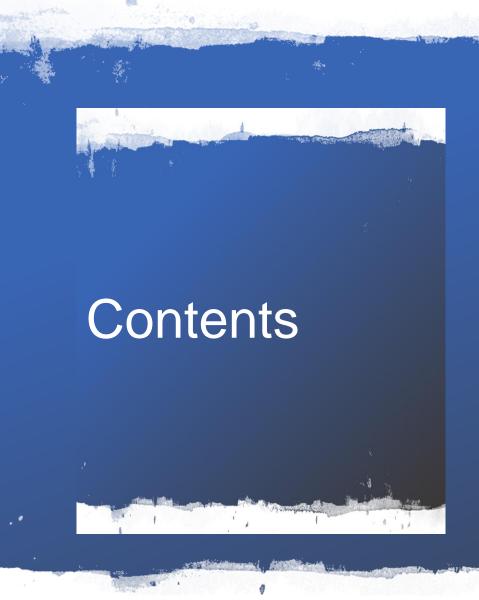
Research Methodology

Guideline for Research Presentation

Purpose

- Defense your proposed solution and convince the committee board to approve and qualify your finding
 - Introduce the background of the research work and interest
 ➤ Its important, challenges and research field
 - 2) Introduce the current available solutions, compare and do critical analyze > Discuss limitations, make conclusion, and give direction to our proposed solution
 - 3) Discuss your proposed solution in detail, justify that
 ➤ It is the best solution for solving your research problem
 - 4) Explain the implementation and testing of your proposed solution
 ➤ Evaluate it and compare with the existing solution
 - 5) Give the conclusion to sum up what you have done and accomplished ➤ Also provide guidance for future work
 - 6) Give thanks if your project is supported



- 1) Research Background
- 2) Research Objective
- 3) Research Problem
- 4) State of the Art
- 5) Proposed Solution
- 6) Implementation & Evaluation
- 7) Conclusion & Future work

1) Research Background

Research Background

- Objective: To introduce the overall view of the topic
- Background
 - The pre-requisite related knowledge to the audience (topic to follow up)
- Challenges
 - Indicate the gaps in knowledge & challenges to give direction
- Important & Interest
 - Can point out the important and beneficiaries of the research work
- Research field
 - Explain where the research will be/is used

2) Research Objective

Research Objective

- Objective: To introduce the research expected outcome of the research study (in 1 sentence)
- To do: explain
 - What do you expect to produce at the end of the research study?
 - > New method?
 - New framework?
 - ➤ New architecture?
 - > New tool?
 - Comparative analysis of methods?



Research Problem

- **Objective**: To illustrate the problem that researcher wants to solve in his/her research study for providing new or better result
 - Introduce the important problem to be solved
 - Usually identify only 1 or 2 research problems
 - 1) For short term research
 - 2) For long term research
 - Use sub-research problems to support the idea
 - ➤ Make easy for the understanding of audience
 - Writing format: declarative or interrogative form

Research Problem – How to do?

Option 1

- Only write the main research problem
- Explain the detail through your speech

Option 2

- List the main research problem with
 - ➤ Some few research questions
 - To make audience easy to catch up



State of the Art

- Objective: To introduce the current existing research finding / results of the research study
- To do: explain
 - What are the existing solutions?
 - What are their limitations?
 - In which context it is applied?
 - What kind of data are used for testing?
 - How does it work?
 - Critical analysis and evaluation of the existing solutions
 - Up to the current moment is the better

State of the Art

Expected outcomes

- A comparison table of existing solutions
- A discussion about the existing solutions
- Direction/guidance for future research work, make connect to your proposed solution



Proposed Solution

- Objective: To introduce your contributions of the research study
- To do: explain
 - Explain your contributions? in detail
 - ➤ Process, data, how it work?
 - Justify your choice
 - ➤ Why the selected solution is chosen?
 - ➤ How is it better than the existing solutions?
 - Explain the concept only

6) Implementation & Evaluation

Implementation & Evaluation

- Objective: To explain the implementation of the proposed solution and how it is evaluated
- To do: explain
 - Explain the implementation and testing of the proposed solution
 - Explain the case study and experimentation data
 - Discuss the evaluation of the proposed solution
 - ➤ How do you evaluate your proposed solution?
 - Compare your solution with the existing solutions, if possible

7) Conclusion & Future work

Conclusion & Future work

- Conclusion
 - Objective: To give the conclusion of the research study
 - What have you achieved?
- Future work
 - Objective: To introduce your future work
 - ➤ Give guidance to future research work
 - ➤ If you have time to continue your work, what will you do next?

References

- List all the important related references that you have studied
 - Follow the requested formatting style
 - They can be:
 - > Books
 - > Articles
 - > Web sites
 - > Reports/thesis