

# Tips for Technical Presentations & Survey Reports

COMP90050

# Why We Do This Project...

- Technology changes rapidly
  - New areas emerge all the time
- It is important to survey these changes
  - Formal way of doing this:
    - Present to colleagues or investors
    - Report to managers
    - Precursor to writing a white-paper for a company positioning itself in the area
    - First step during PhD studies
    - First Chapter of a PhD/Masters thesis
- Expected from anyone with a Masters level degree in IT to be able to produce a quality review of chosen technical topic in IT

# Where You are Now...

- Hopefully you have already looked at the Project Specs
- Googled basic terms and found a pool of information
  - Good for high-level info from Wikipedia etc
- Then you need to go to more specialized sources
  - Scholar.google.com: Finds technical information and details
- Perhaps checked the papers listed at Specs at high-level

# Next...

- Finding/Reading more papers in the topic
- Thinking of preparing a presentation to colleagues who may have IT background but do not know the area in detail
- And do this in a team; means planning
- It is perhaps too good to note that thinking of the presentation as well as the report helps structure your thoughts
- Thus, do not leave the presentations to the end
- We first talk about presentations here as well

# Presentations: Three Most Important Things

- Organization
- Visual Aids
- Delivery and Style

# Be clear on: the Purpose & your Audience

- Be clear about purpose of your talk
  - What do you want your audience to learn?
- Audience analysis
  - Identify your audience and their understanding of the area

# Introduction

- Earn the audience's attention
- Roadmap
  - Explain where you plan to go, set up the story
  - Create a table or figure to organize the area
- “Don'ts”
  - Apologize for being nervous
  - Read the introduction or in general any slide
- Remember: Keep it very simple for the introduction
  - No excessive use of technical abbreviations etc

**Note:** The time allotted to you is comparable to a standard conference presentation so 30 mins is alot

# Body of Your Presentation

- Create main points, do not form full sentences
- Presentation & Language
  - Present points as declarative statements
  - Keep speech points unified, coherent, and balanced
  - Verbalize connections between points
  - Do not form full sentences or paragraphs
  - Do not spend time on code or formulas unless it is a must, and even then only a few lines at a time in a slide
  - Any symbols used must be defined and do not use more than a few in any single slide if possible



# Some Formatting Issues:

## Fonts Are Important

- Use sans serif fonts
- Use readable font sizes
- Use appropriate color combinations

40 point Title

28 point Heading/Body

24-20 point Sub-headings

Anything smaller is too small

# How about this colorful slide?

- Use sans serif fonts
- Use readable font sizes
- Use appropriate color combinations

# Visual Aids Do's and Don'ts

## Do's

Design them large enough

Design them to be simple

Design them to be clear

Label them

Use only what you need

## Don'ts

Use too much text

Use excessive artwork

Make things look cramped

Use too many colors

Overuse capital letters

# Transitions

- A word or phrase that signals when a speaker is moving from a topic or handing over to the next presenter
- Two parts to a transition
  - Idea that the speaker is leaving [**the review part**]
  - Idea that the speaker is coming up to [**the preview part**]
- Example
  - Now that you have seen a general overview of XYZ [**review**], I will discuss each of them in turn [**preview**]
- Use a **map** to remind people which part of a presentation or area in a survey you are coming from and going to...
- This is critical for team presentations

# Discussion/Conclusion Part

- Purpose: Tell them what you told them
  - Use a slide or two for comparing approaches
    - Use figures, tables, charts
  - Offers the audience a sense of closure
- Further Tips
  - Signal the end verbally and non-verbally if you can
  - Make conclusions strong and brief
- Don'ts
  - Drag out the conclusion
  - End on a weak or rambling note
  - Introduce new points that were not mentioned before

# Some Side Tips

- Use of capital letters/special fonts: Many people use too much of these:
  - Bullet points typically have one capital letter at the beginning
  - Just because **You** think a **Word** is **Important** does **NOT** *mean you should **Emphasize** things all the time as it becomes *hard to read!**
  - ALL CAPITAL LETTERS MAKES IT HARD FOR YOUR AUDIENCE TO READ AS WELL!
  - Exclamations: Don't use it too much as well!!!!!!!!!!!!!!!!!!!!!!

# Practicing

- It is the most important aspect of a presentation
- Very critical for team presentations
- You will find out if you
  - Make sense and sound knowledgeable
- How to practice
  - Highlight in your notes difficult pronunciations
  - Practice in a setting similar to how you will present
  - Imagine the audience to whom you will present
  - Always practice out loud and as a team as well

# Last But Not Least: Establishing Credibility

- Make sure you know your work
- Nothing replaces knowledge, no fonts, no colors, etc
- Speak loud and confident enough
- Look at the audience
- Don't assume your audience knows though
  - Watch for audience's non-verbal feedback
  - Adjust your rate, content, or eye contact for them



# After the Presentation: Handling Questions and Answers

- Decide who will answer which types of questions and when
- Use welcoming body language
- Reword the question before answering for all to hear if need be
- Say “I don’t know” if you do not know

# Some Further Teamwork Considerations

- Work out all transitions clearly
  - Between sections
  - Between team members
  - Try to map between these carefully
- Practice as a team multiple times and more than you would do otherwise
- Speak with one at a time
- Give the speaking member full attention yourself as well
  - If you look distracted it will make your audience distracted

# Reports

- A good presentation design → A good report
  - Even if you do not perform well in a presentation, the preparation helps with the report
- Structure is pretty much the same for the presentations as well as the report
- Figures should be reused so they are not wasted
- Audience considerations directly translate
- Many issues such as Introduction being simple directly applies

# Format/Structure of a Report

- Please do not deviate from what the Project Specs say
- These are given with a proper real-life report in mind

# Details on Related Work/Analysis

- Background and critical analysis:
  - Background cannot be a simple list of papers
    - This is the most important issue with bad surveys
  - Organize into subcategories/sections
  - There is always a higher learning level you can give to the audience/readers (same with the presentations)
  - Figure out parameters that matter for comparison
  - Create a table of comparison (or two)

# An Example Comparison Table

**Table 2** Comparison of  $MkNN$  techniques

Technique	Continuous	Incremental	Local access	Unknown path	Order-sensitive
SR- $kNN$ [25]	×	✓	✓	✓	✓
$kVD$ [20]	✓	×	×	✓	×
Ordered $kVD$ [20]	✓	×	×	✓	✓
TP $kNN$ [27]	✓	×	✓	×	×
C $kNN$ [29]	✓	×	✓	×	×
RIS- $kNN$ [33]	✓	×	✓	✓	×
IRU [17]	✓	✓	×	✓	✓
V*- $kNN$	✓	✓	✓	✓	✓

# Wrapping It Up

- Conclusions and future directions
  - Do not underestimate yourself, be innovative
  - Do not repeat the Introduction
- References and sources
  - You should cite extensively for a survey but exclude papers with incremental contributions
    - Use: citation counts, source of the paper, author reputations, etc.
    - Do not cite papers that you have not read for the survey
  - Citations should be done professionally
    - Follow ACM Computing Survey style for the formatting for example