Career Development for Information Hub Students
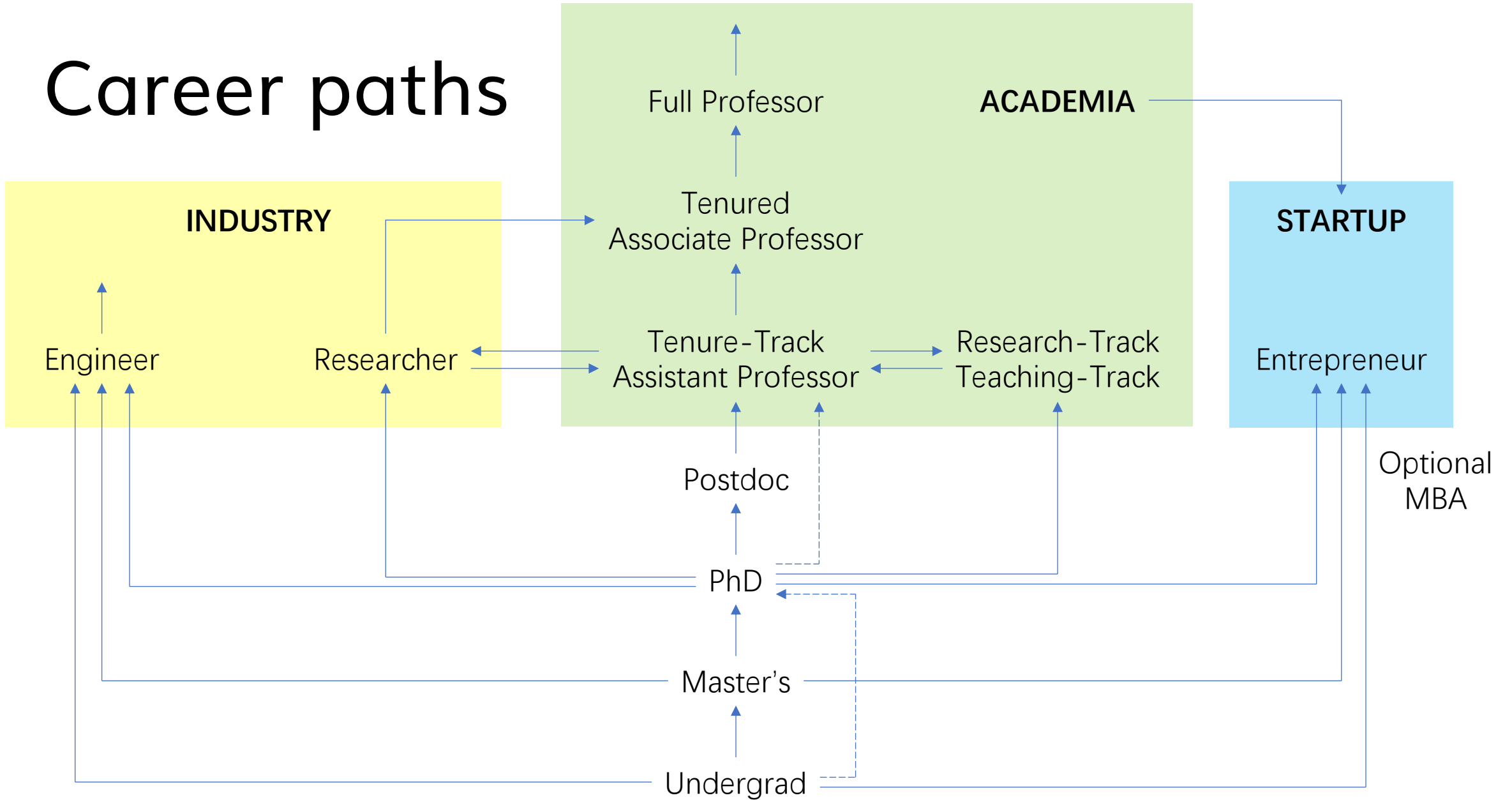
INFH 6780, Spring 2025

Instructor: Dr. Zeyu Wang

Outline

In the past two lectures, we have covered

• Career development paths

• Explaining fractals in five levels of complexity

• Methods to assemble a talk

Career paths

INDUSTRY

ACADEMIA

STARTUP

Full Professor

Tenured
Associate Professor

Engineer

Researcher

Tenure-Track
Assistant Professor

Research-Track
Teaching-Track

Entrepreneur

Postdoc

Optional
MBA

PhD

Master's

Undergrad

How to give a presentation

- Know your **content**
  - If you are going to present something you do not know, it can easily go wrong
  - Be sure to know every technical detail in case someone in the audience asks
- Know your **context**
  - Who is going to be your audience?
  - Why would they spend time listening to you?
  - How to engage your audience?
  - What do you expect to gain from the talk?

How to assemble a talk

1. Write a script
2. Build a storyboard
3. Build the sets
4. Rehearsals and audience screenings
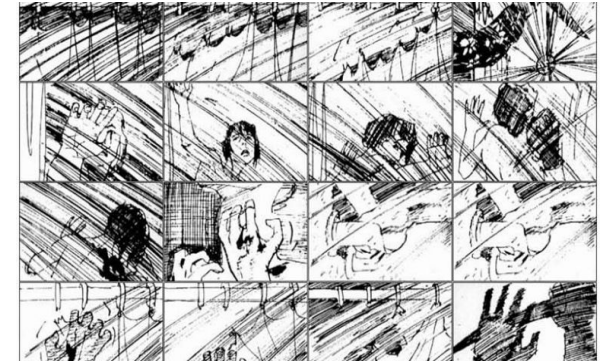
Outline

In the past two lectures, we have covered

- Career development paths
- Explaining fractals in five levels of complexity
- Methods to assemble a talk

Today, I will cover

- **A perfect example of a terrible presentation**
- **The DO's and DONT's of giving a presentation**

Importance of a good presentation

93% of the impression you make
is based on how you LOOK and SOUND

7% on the actual content

[1] Mehrabian, Albert and Morton Wiener, 1967, "Decoding of inconsistent communications," Journal of Personality and Social Psychology 6:109-114
[2] Mehrabian, Albert and Susan R. Ferris, 1967, "Inference of attitudes from nonverbal communication in two channels," Journal of Consulting Psychology 31:248-252.
[3] Daniel Druckman, Richard M. Rozelle, and James C. Baxter. 1982. Nonverbal Communication: Survey, Theory, and Research" Sage Publications 1982, pages 84-85.

Credit: Dr. Justin Salamon @Adobe Research

What went wrong?

What went wrong?

- Technical difficulties
  - Presenter was muted
  - Presenter didn't know how to share the screen
  - Sound media file wasn't found

What went wrong?

- Technical difficulties

- Poor design of slides
    - Distracting font, color scheme
    - Distracting sonic/visual effects
    - Distracting slide/desktop background
    - Way too much text
    - Screenshot equations didn't fit in

What went wrong?

- Technical difficulties

- Poor design of slides

- Poor presentation
  - Not leave enough time for everything
  - Lack of motivation. Why this matters?
  - Generic outline, no explanation of acronyms
  - Filler words like um, uh, …

The DO's and DONT's of giving a presentation

- Dr. Justin Salamon @Adobe Research
- https://www.justinsalamon.com/
- Machine Learning, Audio Processing, Music Information Retrieval

The DO's and DONT's of giving a presentation

- Planning your presentation

- Designing your presentation
  - Convey clear information

- Giving your presentation
  - Be interesting, excite and motivate

Planning your presentation

- What is your message objective?
- Who is your audience?

What's in it for me?

What's in it for me?

- My goal
  - Read my paper
  - Use my method / cite me
  - Give me a high grade / a job / funding
- Audience's goal
  - Learn a new technique
  - Use in their research
  - Assess the competition
  - Collaborate / hire
  - Give you a grade

Thinking about your MESSAGE OBJEVTIVE + AUDIENCE

is the first step towards

Ensuring your talk is INTERESTING
Reducing unnecessary COMPLEXITY

Planning your presentation: structure

- (1) PREVIEW, (2) BODY, (3) RECAP
    - Say what you're going to say
    - Say it
    - Say that you said it

Planning your presentation: hook

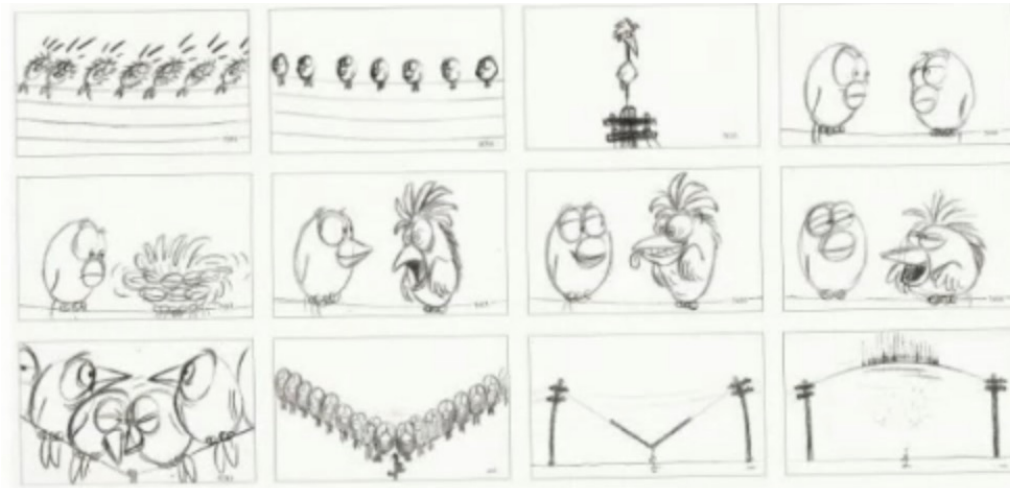- Focuses listeners on key issue
- Grabs their attention
- Fast

✅ cool fact, question, short story

❌ joke, apology

Planning your presentation

- Write out the "storyboard"!
- Bullet for each main section
- Get a feel for the "story" before you "build" it
- Identify necessary "assets" (plots, tables, demos)

Designing your presentation

- "No more than 3" rule
  - No more than 3 colors
  - No more than 3 font sizes
  - No more than 3 font types

Designing your presentation

- Don't abuse animation!
  - Distracts the audience from you
  - Distances the audience from the contents
  - You're not DreamWorks
- Instead…
  - How can I help the audience keep track?
  - Bullet point "animation"
  - Transition slides: we've just seen X, now let's see Y

Designing your presentation

- A picture is worth a thousand words...
- E.g., precision and recall

In pattern recognition and information retrieval with binary classification, **precision** (also called positive predictive value) is the fraction of retrieved instances that are relevant, while **recall** (also known as sensitivity) is the fraction of relevant instances that are retrieved. Both precision and recall are therefore based on an understanding and measure of relevance. Suppose a program for recognizing dogs in scenes from a video identifies 7 dogs in a scene containing 9 dogs and some cats. If 4 of the identifications are correct, but 3 are actually cats, the program's precision is 4/7 while its recall is 4/9. When a search engine returns 30 pages only 20 of which were relevant while failing to return 40 additional relevant pages, its precision is 20/30 = 2/3 while its recall is 20/60 = 1/3.
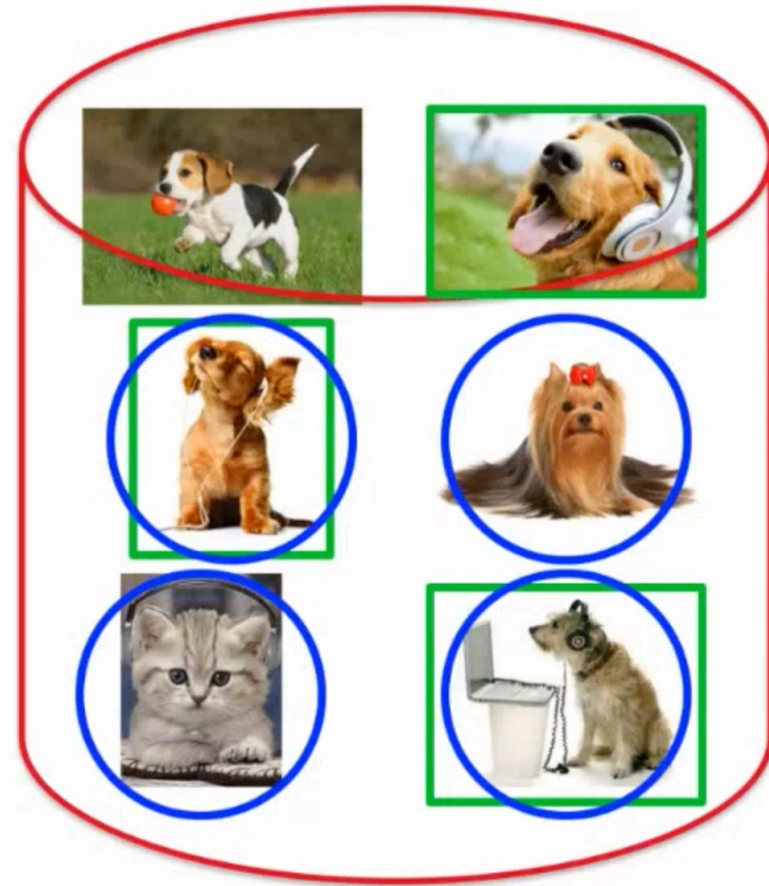
A picture is worth a thousand words...
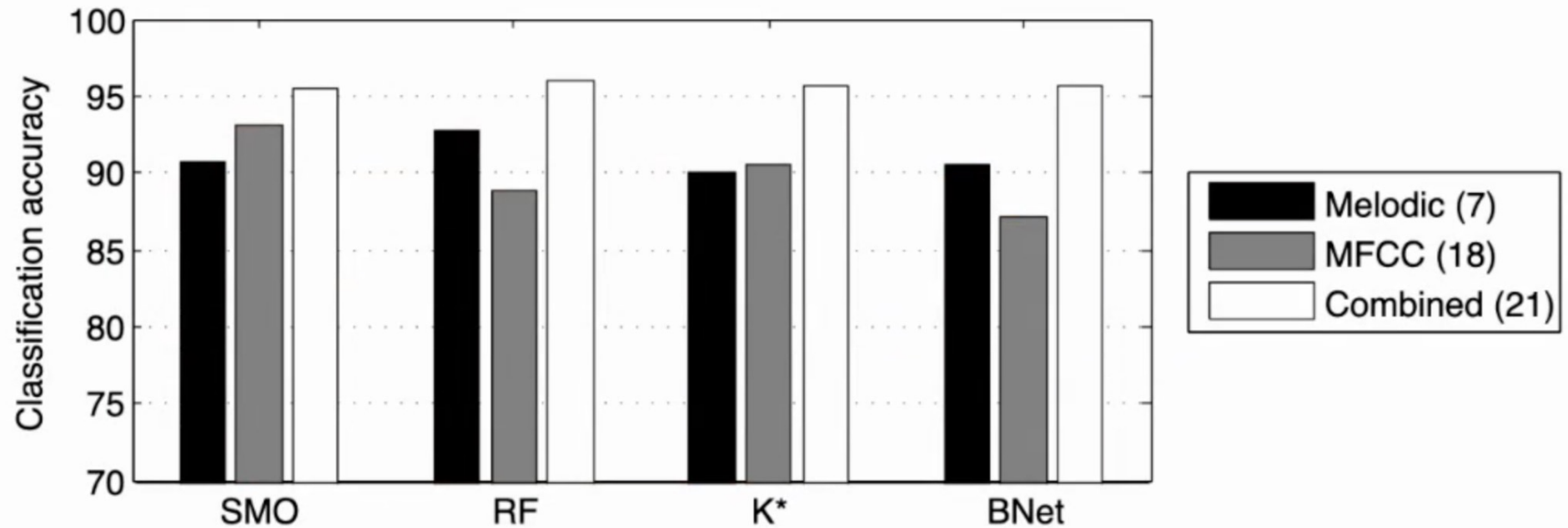
A picture is worth a thousand words...

- If you present a graph...

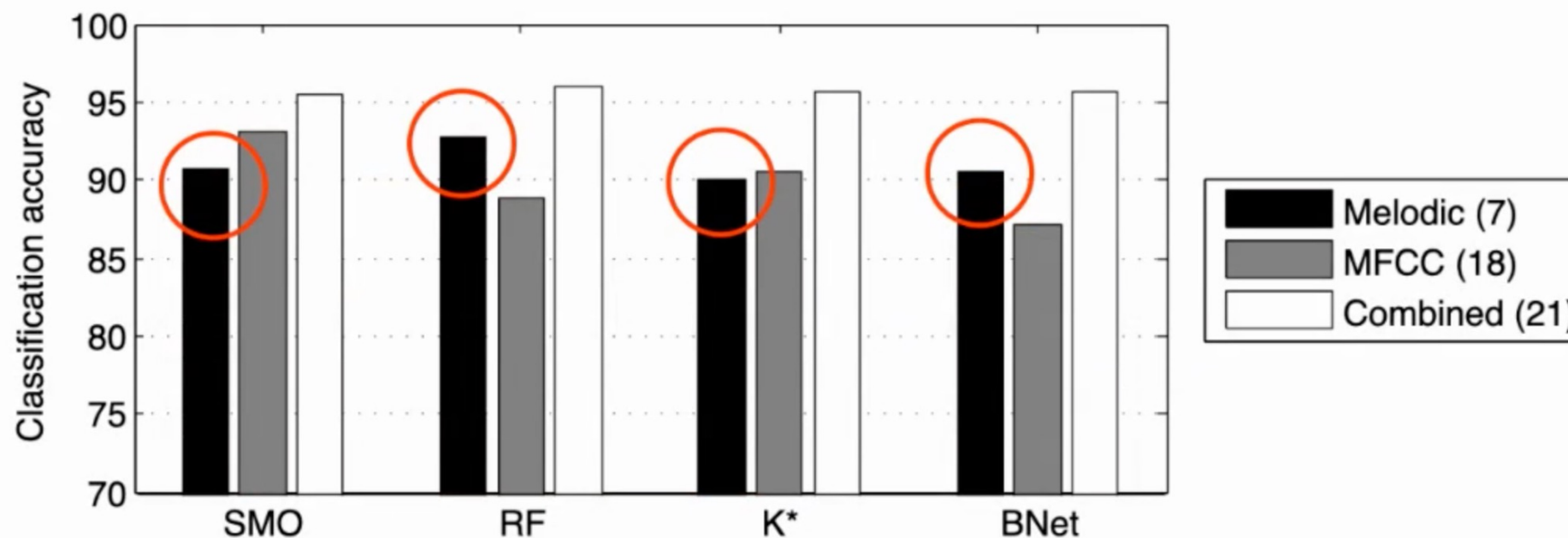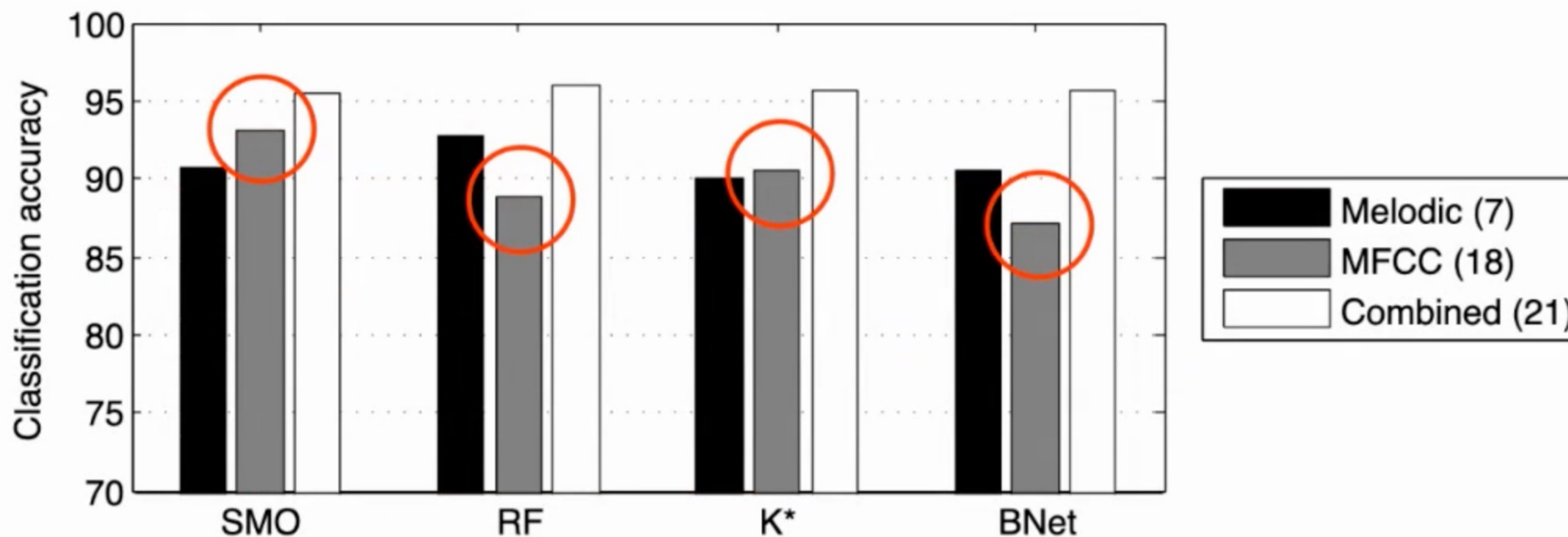# A picture is worth a thousand words...

A picture is worth a thousand words...

- Help the audience follow you!

A picture is worth a thousand words...

- Help the audience follow you!
- Also with equations! (if you must include them...)

$$\textbf{Salience deviation } C_{\sigma_s} = \sqrt{\frac{1}{N} \sum_{n=1}^{N} (s(n) - C_{\bar{s}})^2}.$$

Salience at time n

Salience mean

"Nothing great in the world has ever been accomplished without passion"

– Georg Wilhelm Friedrich Hegel

"If you aren't fired with enthusiasm,
you will be fired, with enthusiasm"

– Vince Lombardi

The DO's and DONT's of giving a presentation

- Planning your presentation

- Designing your presentation

- Giving your presentation
  - Being "maximum you"
  - Energizing your voice
  - Using your body
  - Being funny, being calm
  - Questions
  - Technical details
  - Practice

Giving your presentation

• Smile, eye contact, confidently relaxed, energy in your voice

PASSION in your voice is the SINGLE MOST IMPORTANT factor in getting your audience EXCITED about your ideas

Come prepared: questions

- Think of possible questions
- The evil question: include it in the slides!
- Be concise
- Don't know the answer?
  - Be honest! ("good idea", "I'll have to look into that")
- No microphone for the audience?

Come prepared: arrive early

- Bring all your cables / chargers / adapters / remotes
- Test the equipment before starting
- Save your slides in various formats (keynote, pptx, pdf)
  - And in various locations! (local, cloud, flash drive, friend)
- If you need an internet connection:
  - Make sure you have one
  - Make sure it works!
  - Remember to disable all notifications (especially messaging)

Come prepared: practice

- Practice, practice, practice
- REALLY practice!
  - Out loud, no skipping, no skimming
  - Get the timing right
  - Know what you're going to say (but no script!)
  - Perfect each part of the presentation
  - Get feedback before the real thing

Come prepared: practice

- Practice, practice, practice

- REALLY practice!
  - Out loud, no skipping, no skimming
  - Get timing right
  - Know what you're going to say (but no script)
  - Perfect each part of the presentation
  - Get feedback before the real thing

Practice

Recap

- Planning:
  - My goal (message objective) + audience's goal
  - Structure: PREVIEW (+hook), BODY (3 points), RECAP
- Designing:
  - No more than 3 (fonts, colors, sizes)
  - Use the power of the visual (but don't abuse it)
- Presenting:
  - Be maximum you
  - Energize your voice
  - Come prepared (arrive early, tech details, questions)
  - **PRACTICE PRACTICE PRACTICE PRACTICE PRACTICE**