COGS 180:

Visualization & Presentation for real-world communication

Fall 2016 – MW, 6–7:15pm

Location: Classroom and Office 1 Bldg, room 127

Dr. Alex Petersen

Email: apetersen3@ucmerced.edu
Website: link
Office Location: Social Sciences & Management Building – 206B
Office Hours: TBD

Final Exam: 3-6 pm – Classroom and Office 1 Bldg 127 – Thursday, Dec. 15, 2016

Credit Hours: 4

Course Description: This course will be an interactive experience providing you the valuable opportunity to develop and practice your communications skills. Along the way, as a part of the development of the presentations, we will also learn about the cognitive science underlying effective communication, and we'll even do a little "data science" in order to add some technical visualizations to your presentations!

Abstract: The communication of technical data-driven analysis is becoming increasingly important in diverse real-world settings, such as journalism and business. This course will focus on understanding – and practicing – the various cognitive faculties that underlie effective communication. Seemingly simple concepts such as organization, clarity, and pace can be elusive, but are extremely important in delivering captivating oral presentation, which often rely on high-dimensional visualizations. As such, we will discuss the cognitive aspects of communication – both from the presenter and the audience perspective. We will also discuss the key aspects of various presentation types, from a $\approx$ 15-18-minute TED talk type "discourse" to the 60-second "elevator pitch". The course will be participation, project, and presentation based, in groups and by individual.

Prerequisite(s): Undergraduate level COGS 001 Minimum Grade of C- or Undergraduate level PSY 001 Minimum Grade of C- or AP Psychology 4.
Basic skill set prerequisites are a basic understanding of MS Powerpoint (or the equivalent) and a basic understanding of data processing tools (using excel, python, or the equivalent) so that students can develop data-oriented presentations based upon visualizations drawn from topics of their own interest. The instructor will work personally with those students who do not have prior experience in these skills.

Text(s): (required)

1. *Talk Like TED: The 9 Public-Speaking Secrets of the World's Top Minds*; **Author(s):** Carmine Gallo; **ISBN-13:** 978-1250061539
2. Various articles on presentation/visualization do's and don'ts ("To be distributed" = TBD)

Other Texts and Reading sources: (NOT required)

1. *TED Talks*; **Author(s):** Chris Anderson; **ISBN-13:** 978-0544634497
2. *Resonate: Present visual stories that transform audiences*; **Author(s):** Nancy Duarte; **ISBN-13:** 978-0470632017
3. *Slide:ology: The Art and Science of Creating Great Presentations*; **Author(s):** Nancy Duarte; **ISBN-13:** 978-0596522346
4. *HBR Guide to Persuasive Presentations (HBR Guide Series) (Harvard Business Review Guides)*; **Author(s):** Nancy Duarte; **ISBN-13: 978-1422187104**

Course Objectives:

At the completion of this course, students will be able to:

1. You will learn about theoretical (cognitive) and practical aspects of effective communication
2. You will gain valuable experience in giving technical presentations in a class environment conducive for learning and refining valuable communication skills
3. You will be exposed to advanced graphical software and work with the lecturer to develop data-oriented visualizations tailored specifically for your presentations

Grade Distribution: (out of 100%)

1. Class participation (20%) – interacting in the discussion and providing in-class feedback on other students' presnetations
2. Visualization assignments (20%) – submitting powerpoint slides
3. Class presentations (40%) – individual and in groups
4. Final project/presentation (20%) – group project

Letter Grade Distribution:

≥ 93.00	A	73.00 - 76.99	C
90.00 - 92.99	A-	70.00 - 72.99	C-
87.00 - 89.99	B+	67.00 - 69.99	D+
83.00 - 86.99	B	63.00 - 66.99	D
80.00 - 82.99	B-	60.00 - 62.99	D-
77.00 - 79.99	C+	≤ 59.99	F

Course Policies:

- **General**
  - You are encouraged to bring your personal laptops to each "visualization" instruction
  - Some visualization software demos will take place in the computer lab

  - A basic understanding of "Powerpoint" or "Keynote" is assumed; please contact me personally if you lack prior experience and would like help.

- **Presentations**
  - Students will give solo presentations as well as participate in larger group presentations
  - Students will anonymously score each others presentations
  - Team members will anonymously give participation scores for other group members
  - Scores will be normalized by "scorer" and "scoree" in an attempt to identify student improvement over the course of the class – a principal objective of the course

- **Non-reading Assignments**
  - Weekly assignments – "MW Assignment for following M:" – will be due the Sunday of that week before midnight. Assignments should be emailed to the instructor (apetersen3@ucmerced.edu) with the subject heading: "[COGS 180] - Group/Student Name"

- **Attendance and Absences**
  - Attendance is expected and will be taken each class. You are allowed to miss **1** class during the semester without penalty. Any further absences will result in point and/or grade deductions from the "Class participation" and/or "Class presentation" grade components.
  - Students are responsible for all missed work, regardless of the reason for absence. It is also the absentee's responsibility to get all missing notes or materials.

Tentative Course Outline:
The weekly coverage might change as it depends on the progress of the class. However, you must keep up with the reading assignments.

Week	Content
Week 0 (Aug. 24)	• In class: **Intro on Visualization and Presentation in a data-oriented world.** • Assignment for following M: (a) Read Introduction chapter. (b) *What are you passionate about???* Choose 5 broad ideas/topics (e.g. sports, poverty, science,...) that will be the focus for your analysis/presentations for the rest of the course. Email me so that I can attempt to group the students according to interest.
Week 1 (Aug. 28 - Sept. 4)	• In class: **Theory of Ted Talks. Visualization and presentation in a data-oriented world.** • Assignment for following M: (a) Read Chapter 1: "Emotional".
Week 2	• In class: **Theory of Ted Talks. Visualization and presentation in a data-oriented world. Brief intro to web data sources. Students assemble into groups for group project 1 and collectively choose a group topic.** • Assignment for following M: (a) Read Chapter 2 : "Novel". **(b) Within group: decide on a topic/dataset to use for project 1 and email instructor the plan. (c) Individual talk 1: choose some topic that you are passionate about to give a 5-minute talk. Email instructor individually the topic for talk 1.**
Week 3	• In class: **Theory of Ted Talks. Cognitive aspects of visualization & presentation.** • Assignment for following M: (a) Read Chapter 3 : "Memorable". (b) Within group: Gather dataset to use for project 1 (consult with instructor). (c) Put together Individual talk 1.
Week 4	• In class: **Theory of Ted Talks. Cognitive aspects of visualization & presentation.** • Assignment for following M: (a) Read TBD articles. (b) Within group: Work on dataset for project 1 (consult with instructor). (c) Put together Individual talk 1.
Week 5	• In class: **Cognitive aspects of visualization & presentation. Presentation of individual talk 1 (5 Min "Ted Talk" – no slides).** • Assignment for following M: (a) Read TBD articles. (b) Within group: Work on visualization for project 1 (consult with instructor).
Week 6	• In class: **Cognitive aspects of visualization & presentation. Presentation of individual talk 1.** • Assignment for following M: (a) Read TBD articles. (b) Within group: Work on visualization for project 1 (consult with instructor).
Week 7	• In class: **Cognitive aspects of visualization & presentation. Presentation of individual talk 1.** • Assignment for following M: (a) Read TBD articles. (b) Within group: Finish project 1 presentation (consult with instructor).

Week	Content
Week 8	• In class: **Introduction to advanced visualization tools. Presentation of group talk 1 (18 Min Ted Talk).** • Assignment for following M: (a) Read TBD articles. (b) **Individual talk 2: choose another topic to give a 5-minute talk with 3 slides. Find a visualization that you like and summarize in a paragraph what makes the visualization powerful, clear, and esthetically pleasing. How would you improve the visualization? Email instructor the topic + paragraph + image for talk 2.**
Week 9	• In class: **Introduction to advanced visualization tools. Students assemble into groups for project 2 and choose topic.** • Assignment for following M: **(a) Within group: decide on a topic/dataset to use for project 2 and email instructor the plan.**
Week 10	• In class: **Demo of advanced visualization tools. Groups project: determine topic and find dataset.** • Assignment for following M: (a) Read TBD articles. (b) Within group: Work on dataset for project 2 (consult with instructor).
Week 11	• In class: **Demo of advanced visualization tools. Groups project: work on dataset.** • Assignment for following M: (a) Read TBD articles. (b) Within group: Work on dataset for project 2 (consult with instructor).
Week 12	• In class: **Demo of advanced visualization tools. Groups project: work on dataset. Presentation of individual talk 2. Email instructor presentation file.** • Assignment for following M: (a) Read TBD articles. (b) Within group: Work on visualization for project 2 (consult with instructor).
Week 13	• In class: **Demo of advanced visualization tools. Groups project: work on dataset. Presentation of individual talk 2. Email instructor presentation file.** • Assignment for following M: (a) Read TBD articles. (b) Within group: Work on visualization for project 2 (consult with instructor). (c) **Individual "Elevator pitch / Lightning" talk 3: choose a final topic to give a short 3-minute talk with 6 slides (autorotated every 30 seconds). Email instructor the topic for talk 3.**
Week 14	• In class: **Groups project: work on final presentation.** • Assignment for following M: (a) Read TBD articles. (b) Within group: Work on final presentation for project 2 (consult with instructor).
Week 15 (Dec. 5 - 9)	• In class: **Groups project: work on final presentation. Presentation of individual talk 3. Email instructor presentation file.** • Assignment for following M: (a) Read TBD articles. (b) Within group: Work on dataset for project 2 (consult with instructor).
FINAL (Dec. 15)	• **Presentation of final 18-min Ted Talks. Email instructor presentation file and video.**