Welcome!

Intros
- async: Piazza self-intro thread
- sync also sign up on spreadsheet so I see who’s here vs who’s registered
  - will use that for breakouts today also
  - if you have privacy concerns, ok to leave off email (and/or last name) and send it to me directly
  - link on course page

Course Logistics
- http://www.cs.ubc.ca/~tmm/courses/547-21

Reading
- textbook
  - library has multiple free ebook copies
- papers
  - links posted on course page
  - list, links, see library EZproxy off campus
- 3 each session: mix of chapters & papers

Comments submission & marking
- written comments on reading in advance, in two rounds
  - round 1 due noon Mon (2 days before class), 75% of comment mark
    - 1 for each reading
    - post to Piazza
  - round 2 due noon Wed (3 hrs before class), 25% of comment mark
    - written response to at least 1 comment per session/week
    - start as pass/fail marking, see how it goes
    - switch to explicit marking if quality concerns

Projects
- groups of 2, 3, or 4
- UBC mask requirement for indoor public spaces
- Pandemic mode
  - if you need to declare a medical exemption, paperwork is centralised through Centre For Accessibility
  - please don’t eat if you drink, remind between sips
  - we follow guidance from PHO which could change over the term
  - more on datasets and tools later

Project topics
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Project topics
- programming
- analysis

Marking
- 5% Participation
  - UBC mask requirement for indoor public spaces
- Piazza self-intro thread
- 25% Written Responses to Others (on course page)
  - if you cannot attend class (illness, quarantine, other)
- 25% Final Presentation Participation
  - common case
- 25% Final Report
- 40% Coursework
t
- 36% Asynchronous Readings & Online Discussion
  - 9 weeks, 4% per week
- 75% Comments on Readings, 21% Responses to Others
- 15% In-Class Participation
- 15% In-Class Exercise Participation (12 sessions, 1% per session)
- 2% Final Participation Participation

Audience
- no formal prerequisites
- many areas helpful but not required
- human-computer interaction (HCI) or CS/SC/SHM this term or equivalent
- computer graphics, cognitive psychology and/or learning statistics, algorithms, visualization domain,
- programming skills required for most project types
- open to non-CS people
- no programming background, can do analysis or survey project
- communication skills in English important for success
- to communicate: reading, writing, discussion, presentations
- need strength in at least one of these 3 programming, English, HCI
- unsuccessful combination: weak ESL, weak programming, no HCI background
- open to informal auditors
- some or all days of reading/discussion/activities, you’ll get out of it what you put into it...

Finding info; finding me
- course page is font of all information
  - don’t forget to refresh, frequent updates
  - async: also sign up on spreadsheet so I see who’s here vs who’s registered
- Piazza self-intro thread
- in-class self-intro
- in-office Wed right after class (6.15-7.15pm)
- by appointment (in-person or zoom)
- unlikely to catch me by dropping by, usually either in meeting or elsewhere
- X661 (X-Wing of ICICS/CS bldg)

Fundamental material
- first part: read & participate [50%]
  - before class: async discussion [36%]
  - during class [14%]
  - some lecture & discussion
  - frequent in-class work/exercises/critique

Comments content
- comments or questions
- fine to be less formal than written report
  - correct grammar and spelling still expected
  - be concise; one paragraph is good

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- 40% Coursework
Projects: Design studies
- BYOD (Bring Your Own Data)
  - VAD book, Ch 2: What: Data Abstraction
  - VAD book, Ch 3: Why: Task Abstraction
  - paper: Nested Model

Enrollment
- don’t worry if you’re not registered yet, just attend and keep up
  - major churn is normal the first few weeks
  - spaces will definitely open up
- do make sure you’ve signed up on spreadsheet!

Next Time
- to read & discuss (async, before next class)
  - VAD book, Ch 2: What: Data Abstraction
  - VAD book, Ch 3: Why: Task Abstraction
  - paper: Nested Model

Visualization (vis) defined & motivated
- human in the loop needs the details
  - doesn’t know exactly what questions to ask in advance
  - long-term exploratory analysis
  - speed up through human-in-the-loop visual data analysis
  - preservation of known results
  - stepping stone towards automation: refining, trust building

Exercise: Time Series
- designed to help people carry out tasks more effectively
  - intended task, measurable definitions of effectiveness

Now: In-class design exercise, in small groups
- Three time-series scenarios
  - 1 every 5 min, duration 1 year; 1 thing: building occupancy rates
  - 2 several years and several things: every 5 min, 5 years; 10 currencies
  - 3 several parameters, many things every 5 min, 1 year; 10 params on 1000 machines
- Small group exercise: 60+ min
  - break-out groups (4 people/group)
  - brainstorm possible visual encodings & interactions for each scenario
  - document in your group’s google doc; w/ text & sketch images
  - report back: I’ll flip through google docs, some questions for group spokesperson
- Design space examples/discussion: 15-20 min

Exercise: Time Series
- personal interest

Case 1: 3D Approach (Not Recommended)
- extruded curves: detailed comparisons impossible

Case 2: ChronoLenses

Case 3: LiveRAC

Visualization
- Computer-based visualization systems provide visual representations of datasets designed to help people carry out tasks more effectively.
- Visualization is suitable when there is a need to augment human capabilities rather than replace people with computational decision-making methods.

- derived data: cluster hierarchy
- juxtapose multiple views: calendar, superimposed 2D curves

Other Case (compare 2) : Stack Zooming

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- major churn is normal the first few weeks
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This week
- async read only
  - Course Logistics (no comments, no responses)
  - VAD Chapter 1 (comments only, no responses)
  - async discuss
  - self-interest
  - sync (now!)
  - logistics Q&A
  - time-series exercise
  - small groups mixed with lecture / discussion

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