COMP 915: PROJECT COURSES

What is a project-based course?

- "Project" versus "project-based learning/course"
  - Former can be very structured, while the latter is often unstructured
- Design & develop solutions on your own
- Learn how to walk through ill-structured problems
- Typically done in a team
- What are the steps?
  - Problem identification
  - Devise a potential path to the solution
  - Develop a prototype
  - Evaluate, collect feedback, refine

Pedagogical approach

- Problem identification
  - Ask questions, identify all assumptions
- Potential path to the solution
  - Generate as many ideas as possible, all need not be good, vote on the ideas, suspend some
- Prototype
  - Expose assumptions or unforeseen challenges
  - Should be amenable to change
- Test
  - Were the assumptions valid? Theory vs practice?
- Structured versus unstructured learning (open-ended, often promotes better learning, helps more inquisitive learners)

Examples

- Project-based courses consider questions like "Are electric vehicles really helpful?" - Many ways of pursuing this. A project-based approach gives students choice and agency ...
- 1D, 2D, 3D projects
- Examples
  - Interplay between compilers & architecture
  - How to combine computer vision with traditional sensing (e.g., LIDAR)
- Interdisciplinary 2D project?