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 The University of Texas at Austin  
College of Natural Sciences

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# Academic Ethics and Integrity

CS103F: Ethical Foundations of Computer Science

January 22, 2019

# Welcome!

- Goals for this semester:
  - Learn to recognize ethical decisions in computer science
  - Learn to understand how those decisions affect you and others
  - Develop the ability to identify the best course of action
  - Develop the courage and stamina to be the person you want to be
- How we're going to do it:
  - Break apart into medium-sized groups to review case studies of previous week
  - Come together as class to go over broad discussions
  - Introduce case study and background material for upcoming group blog post
- Note that we may or may not cover all background material for the upcoming blog post, so students are expected to read additional slides outside of class

# Who is Sarah?

- Education
  - Undergrad in Russian/Media Arts and Sciences from Wellesley
  - MS and Ph.D. in CS from UT Austin
- Teaches: CS354, CS354r, CS349
- Outside Dev
  - Akula Games
  - Local and networked cooperative games
  - Empathy-building through games
- Hobbies
  - Brazilian jiu-jitsu
  - Art and writing
  - Playing video games!

# Who is Alison?

- Education
  - Undergrad in CS from Georgia Tech
  - MS and Ph.D. in CS from UT Austin
- Teaching: CS439, CS398T, TA training
- Service
  - WiCS Faculty Advisor
  - Coding in the Classroom and Code Orange (coding outreach programs) faculty advisor
  - Hour of Code Organizer
  - Lab director for First Bytes and Code Longhorn
- Family
  - Married
  - Three children: two boys (11 and 7) and one girl (4)
  - Two dogs (14.5 and 12.9)

# A Few Things About the Class: Logistics

- Participation matters... a lot.
  - Goal of this course is to learn to identify, understand, and reason about ethical dilemmas
  - That takes practice
  - Participation matters in class, in your groups, and in your assignments
- Assignments include weekly blog posts
  - Any blogging platform is fine (suggestions and instructions will be included with next week's assignment)
  - About 300 words, broken up into 3 parts
  - Personal views okay, but should be supported with well-reasoned arguments based in fact
- And peer reviews of those blog posts

# A Few Things About the Class: Expectations

- Behave according to the highest standards of ethical conduct
- Maintain academic integrity
  - Learn more today
  - Learn more from the syllabus
- Be polite, professional, and empathetic
  - Disagree with arguments, not people
  - Be kind

# Today's Plan

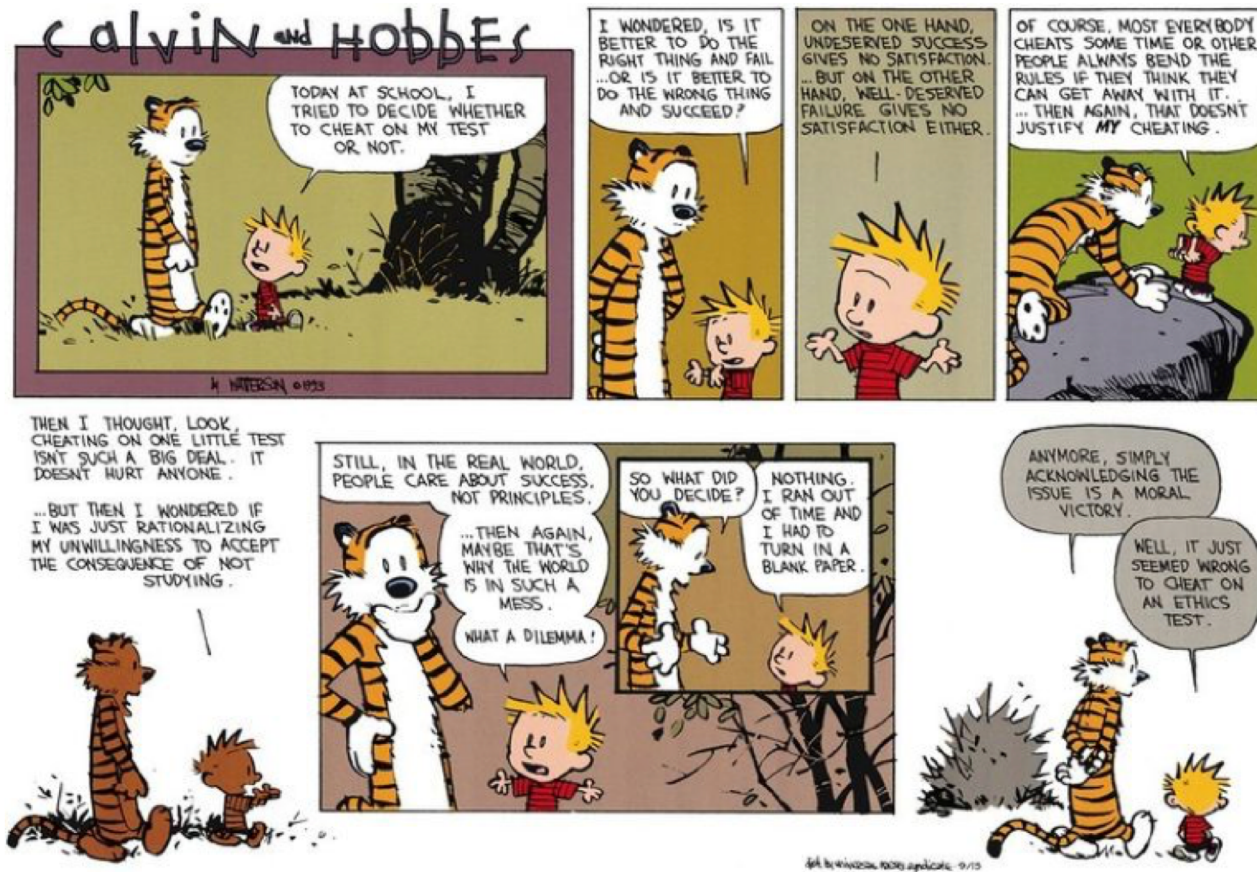
- Introduction to Ethical Frameworks
- Case Study: Andrew Wakefield



# Discuss

Consider an ethical dilemma you've faced. Explain the circumstances, why you responded the way you did, and other potential responses to this dilemma.

# What are Ethics?



# Ethics and Morality

- Morality, from Latin *moralis* (custom). Actions are moral if they are “good” or worthy of praise
- Ethics, from Greek *ἠθός* (custom). The formal study of moral standards and conduct
- Goal: construct a general basis for deciding what is moral

# What about Laws and Religion?

- These categories are related but...
- Laws are about maintaining order in society
  - Not necessarily ethical
- Religions have diverse approaches to beliefs and behaviors
  - Too broad to study in this class
- Both will come up indirectly in this class though!

# What are Ethical Frameworks?

- Systems that guide ethical choices and provide a reason for that choice
- This is an unsolved problem!
  - Numerous approaches that result in vastly different outcomes and behaviors
- Three broad frameworks:
  - Duty-based framework
  - Consequentialist framework
  - Virtue framework

# Ethical Theories

- Duty-based (Non-consequentialist)
  - Concerned with agent's intent rather than consequence
- Consequentialist
  - Concerned with consequence of agent's actions
- Virtue (Agent-centered)
  - Concerned with ethical makeup of agent

# Duty-based

- Often associated with Immanuel Kant's "categorical imperative"
  - "Act only according to that maxim by which you can at the same time will that it should become a universal law."
- Ethical conduct means choosing actions that are right and good
- Consider duties and obligations when choosing

# Problems?

- Good intents are valued over good outcomes
- Does not answer how to act when two duties conflict
- Does not provide definition of ethical behaviors



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# Consequentialist

- Based on Utilitarian philosophy
  - Weights good and bad produced by action to determine overall best action
- Ethical conduct means attempting to do the most good and the least harm
- Considers the impact on all individuals involved when choosing

# Problems?

- The needs of the many override the needs of the few
- Any action can be justified if enough good comes out of it
- Does not address how to predict outcomes based on actions

# Virtue

- Based on ideas of Aristotle and Confucius
  - Agents should act according to their ideal self
- Ethical conduct means determining an agent's traits and behaviors and building on those that foster good
- Considers entirety of an agent's life rather than individual actions

# Problems?

- Focuses on personal character rather than a system for determining action
- High level approach requires a depth of understanding and interpretation to implement effectively
- Does not define virtuous traits

# Case Study: Andrew Wakefield

- Andrew Wakefield was a doctor in Britain
- In 1998, he published a paper linking the MMR vaccine to autism
- But
  - Results could not be repeated
  - Refuted by other stories
  - Study was small (12 children)
  - Investigations found:
    - Only presented data that upheld his case
    - Data was gathered unethically
    - Wakefield was on the payroll of lawyers trying to sue vaccine manufacturers
- Paper was retracted in 2010, and Wakefield lost his license

# Announcements

- Blog response to the Andrew Wakefield study is due before next class
  - Details linked off the schedule
- This one you'll do individually, but you'll work with a group for the others