

CPSC 430

Computers & Society



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Class 1 !!

Dr. Firas Moosvi | 2024_S1

Slides courtesy of Dr. Kevin Leyton-Brown

Class Outline

1. Tech check (5 mins)
2. Introductions (5 mins)
3. About this course (60 mins)
4. Break
5. Course Demos (30 mins)
 - Ed Discussion
 - MTA
 - Perusall
 - PrairieTest
6. Course Topics Activity (20 mins)
7. Debrief (10 mins)
8. Reminders before next class (5 mins)

Introductions

Course TAs

Contact Us

Team Member	Pronounce as	Contact	Office Hour
Dr. Firas Moosvi (he/his/him); Instructor	Fur-az Moose-vee	Ed Discussion	TBD
Mobina Shahbandeh		Ed Discussion	TBD
Justin Rahardjo		Ed Discussion	TBD
Rina Forristal		Ed Discussion	TBD
Maissan Bazazeh		Ed Discussion	TBD



Hidayat Zarkoob



Mobina Shahbandeh



Justin Rahardjo



Rina Forristal



Maissan Bazazeh



Firas Moosvi

Lecturer

University of British Columbia



Biography

I am a Lecturer in the Computer Science department at the University of British Columbia. Though I mainly teach computer science now, I am a multidisciplinary educator with a PhD in Physics and is also interested in data science and education in general. I strongly believe in computational literacy for all and aims to make STEM courses accessible through Active Learning techniques and open education resources. My two main research umbrellas are the scholarship of teaching and learning (SoTL), and Learning Analytics. I am looking at how learning analytics data can provide insight to surface and ultimately reduce inequities in STEM programs. I am also heavily invested in promoting and implementing alternative grading systems in large classes, at scale. I am always happy to collaborate on teaching and learning projects, drop me a note here!

Interests

- Scholarship of teaching and learning
- Authentic assessments
- Alternative grading paradigms
- Learning analytics
- Data visualization and science communication

Education

-  PhD in Medical Physics, 2019

University of British Columbia

-  MSc in Medical Biophysics, 2012

University of Toronto

-  BSc in Biophysics, 2009

University of British Columbia

About Me

Research Interests



Learning Technologies

Use of learning technologies to enhance teaching and learning.



Active Learning

A learning method that de-emphasizes didactic teaching and actively engages students with material via problem solving, case studies, role plays and other methods.



Learning Analytics

Extracting trends from learner data using analytical tools to improve learning.



Equity in STEM

Developing and implementing methods of inclusive teaching to reduce systemic inequities in STEM education.



Visualizations

Representing data using effective graphs, plots, and other special visualizations.

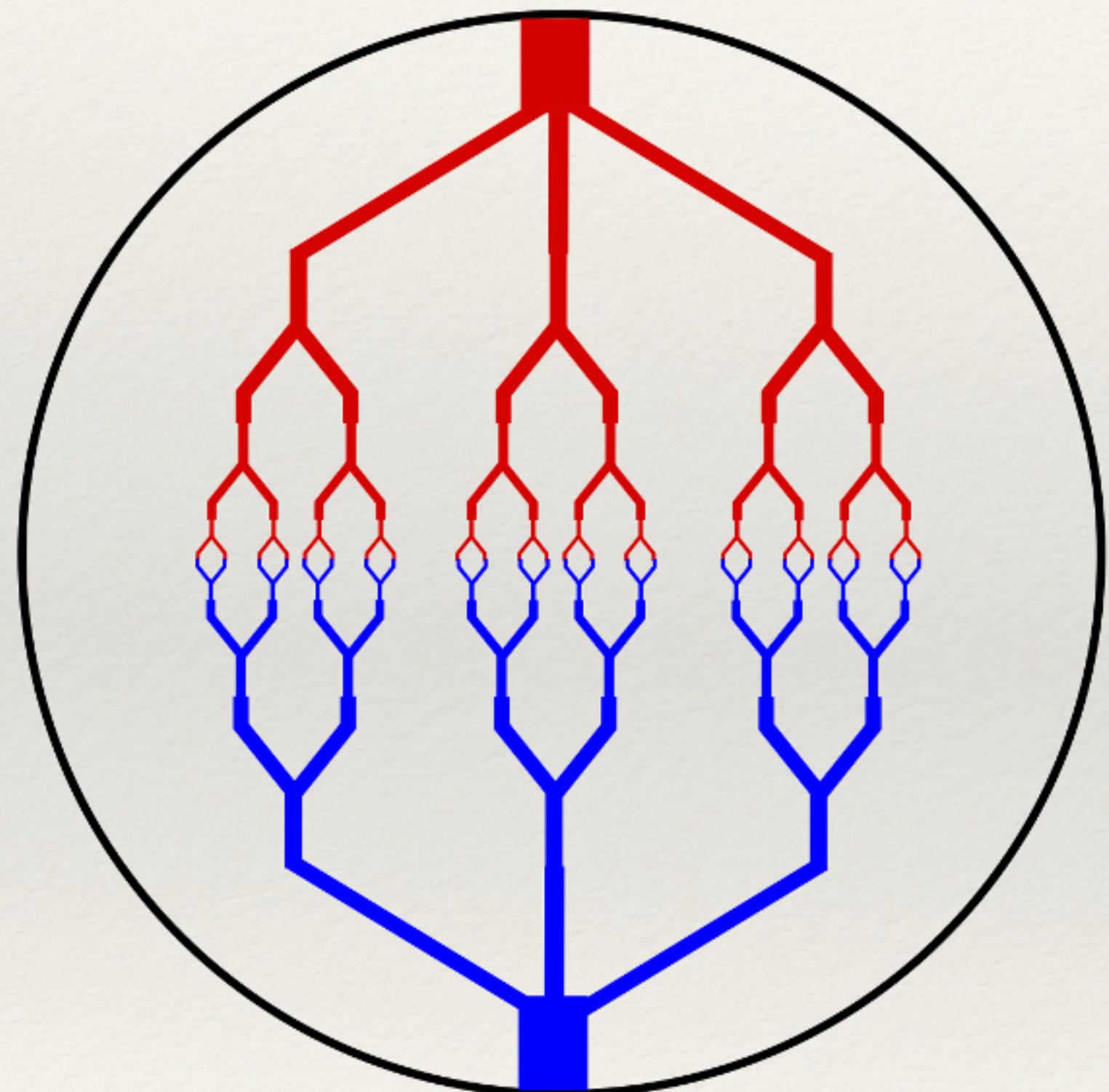


Alternative Grading

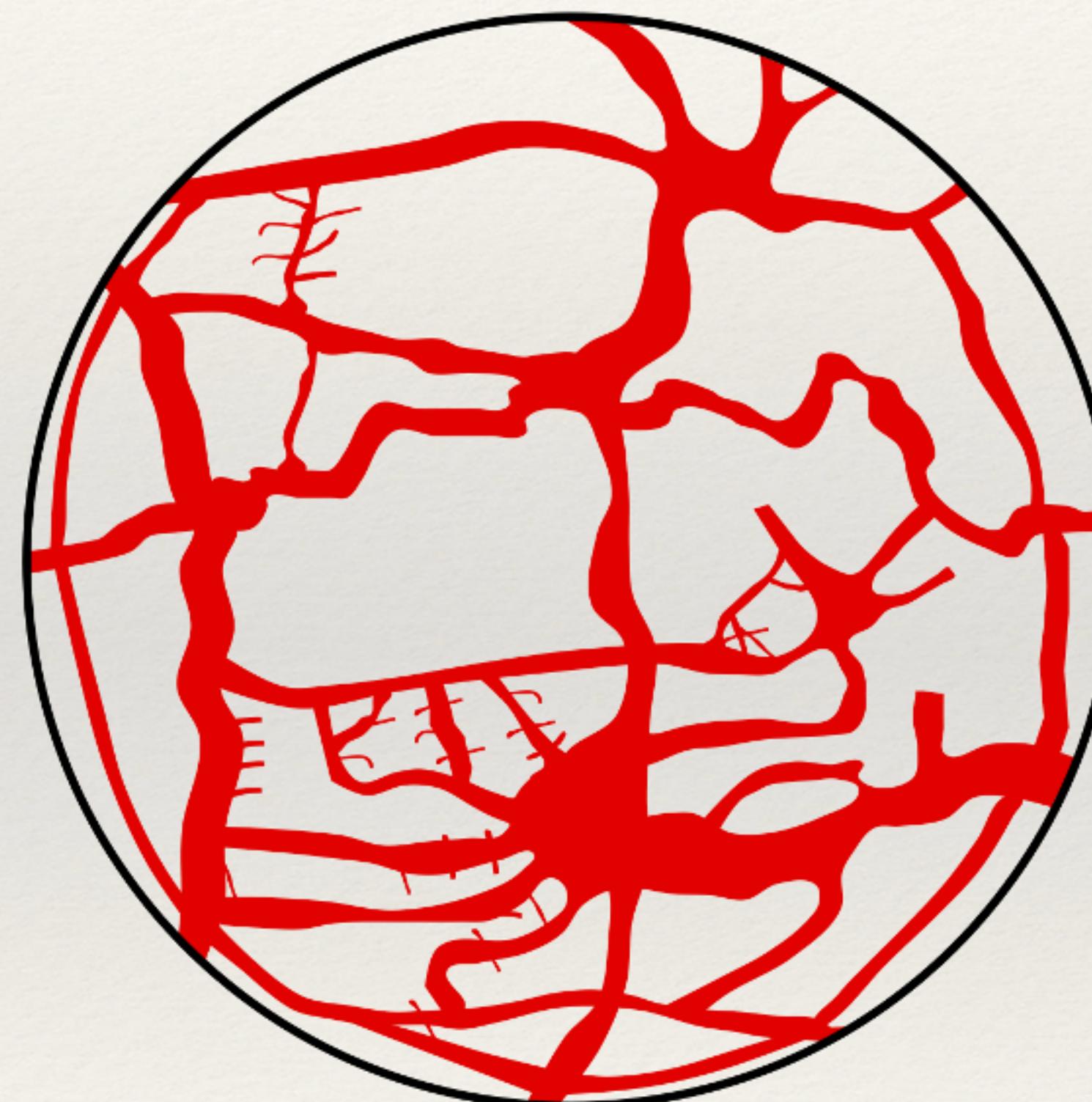
Challenging the systems and structures associated with traditional grading in higher education.

Implications of abnormal tumour vasculature

Normal blood vessels



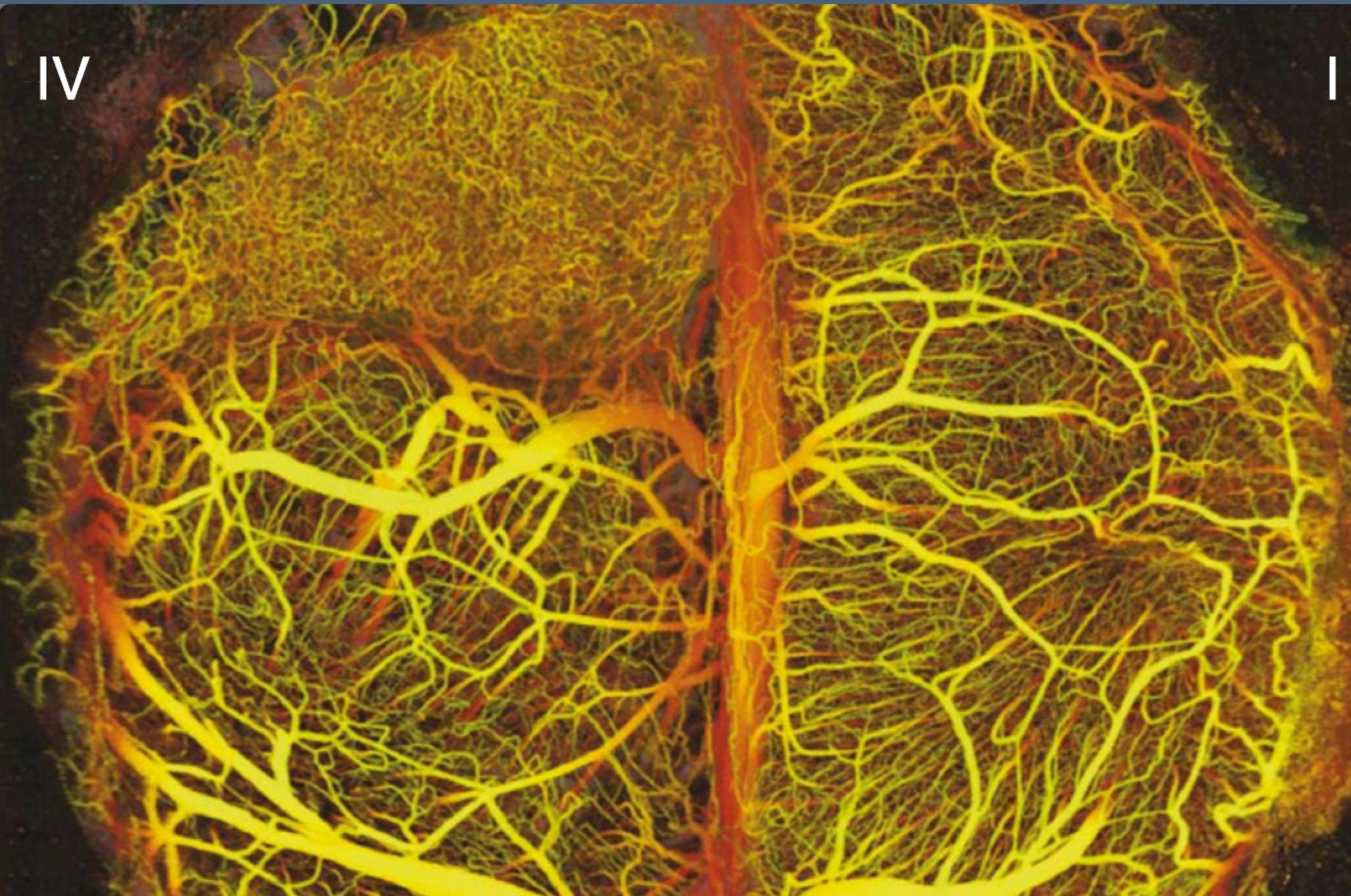
Tumour vessels



- ▶ Hypoxic and acidic environments significantly affect treatment and progression of cancer
- ▶ Abnormal perfusion patterns in the tumour limits delivery of drugs to target regions
- ▶ This necessitates higher doses that increases toxicity

About Me

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Optical Frequency Domain Imaging (OFDI)

- ◆ Anaesthetized mouse brain imaged through **cranial windows** using optical imaging techniques
- ◆ Vessel colour encodes **depth**; closer vessels are yellow and further vessels are red
- ◆ Note the normal brain vascular branching patterns in quadrants I, II, and III compared to the chaotic

About this Course

Calendar

June 2024

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	12	13 E0 Window • E0 9 AM	14 E1 Window	15 E2 Window	16 • E1 9 AM • PRO 9 AM	17 E0 Resubmission Win...
	19	20 E1 Resubmission Window	21 E2 Resubmission Window	22 E3 Window • PR2 9 AM	23 E4 Window	24 • E3 9 AM
	26	27 E3 Resubmission Window • E4 9 AM • PR3 9 AM	28 E4 Resubmission Window • PR4 9 AM	29 E5 Window	30 E6 Window	31 • E5 9 AM
	2	3 E5 Resubmission Window • E6 9 AM • PR5 9 AM	4 E6 Resubmission Window E7 Window • PR6 9 AM	5 E8 Window	6 • E7 9 AM	7 8
	9	10 E7 Resubmission Window • E8 9 AM • PR7 9 AM	11 E8 Resubmission Window E9 Window • PR8 9 AM	12 E10 Window	13 • E9 9 AM	14 15
	16	17 E9 Resubmission Window • E10 9 AM • PR9 9 AM	18 E10 Resubmission Window • PR10 9 AM	19 20	21 22	

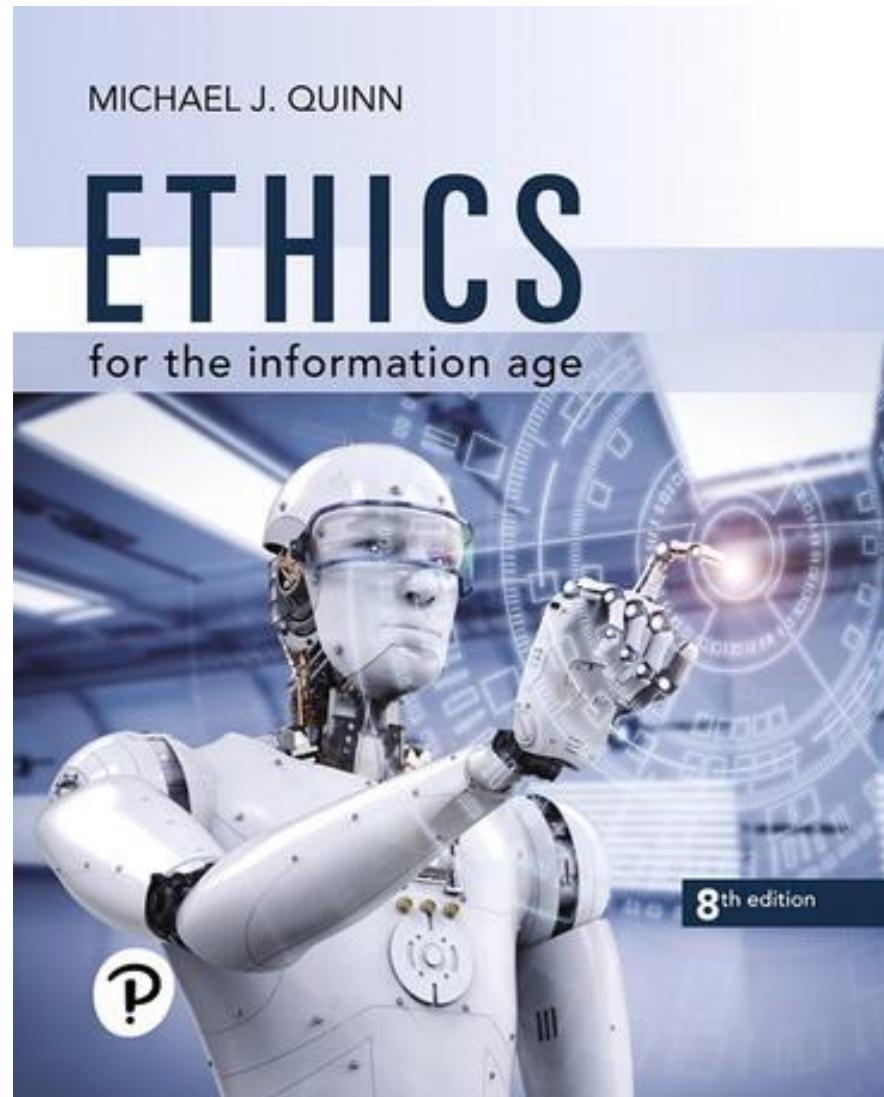
Jun 1

OK, I get where the room is and how you'll compute my grade. What will we be learning?

COURSE CONTENT

Textbook

- We will be using the textbook *Ethics for the Information Age, 8th Ed*, by Michael J. Quinn.
- It's important that you have a copy, because we'll be reading the whole thing—starting next week!
- Old editions exist, but you're responsible for all material in the 8th edition.



Topics (pretty cool stuff, actually ☺)

- Writing and argumentation, History of computing, storage, networking (next 3 classes)
- Ethics & Argumentation (5 classes)
- Social issues (1 week each):
 - Networked communications
 - Intellectual Property
 - Information Privacy
 - Privacy and the Government
 - Artificial Intelligence
 - Computer & Network Security
 - Computer Reliability
 - Professional Ethics
 - Work & Wealth
- Next class:
 - break into 18 groups
 - get assigned a statement and a position for or against
 - develop arguments for your assigned position
 - present your list to the class; we'll discuss briefly
 - everyone votes on the issue (you vote freely)
 - we'll revisit these questions throughout the course.
You'll get to see if your opinions change.

Where will your grade come from? What will you need to do to succeed in the class?

ESSAYS, PEER REVIEW, AND PARTICIPATION

Course Description

- We'll explore the interplay between **information technology and society**, emphasizing ethical issues.
- You'll come away with an increased:
 - understanding of the **social and ethical implications** of computer use and abuse;
 - ability to **think critically and defend decisions** logically;
 - appreciation for **alternate points of view**.
- Our focus will be on **reading, writing and discussion**.
 - Each week students will complete an **assigned reading**, write a **mini-essay** in response, and **evaluate the work of others**.
 - Classes will emphasize discussion and debate.
 - The ability to speak, read and write fluently in English is **essential for success** in the class.

Weekly Essays

- Do **assigned readings** of up to one chapter from the textbook
- Take a **multiple-choice quiz** online to test your comprehension
- Write one **short essay**
 - You'll often be given multiple prompts from which to choose
 - You'll be allowed up to 2500 characters; that's less than one single-spaced page
- At first: do some **calibrated peer review**
 - This is practice for the following; details in a minute
- Perform between 3 and 7 **peer reviews** of others' essays
 - the number assigned to you will depend on previous week's class attendance; described shortly

Grading Your Essays

- You'll **receive at least 3 peer reviews** of your work, each week
 - These reviews will be **double-blind** (you won't know who reviewed you)
 - You'll be graded on a five-point scale on four dimensions:
 - Was the essay **well structured**, stating a thesis, supporting it with argument(s) that are clearly related to this point and (if relevant) distinct from one another, and linking these arguments in a logical way?
 - Did the essay **do a good job of making its case**, choosing relevant arguments, backing them up with evidence and examples at an appropriate level of detail, and responding to contrary views as appropriate?
 - Did the essay demonstrate a **good understanding of the course's subject matter**, including both the topic and the wider context?
 - Was the essay presented **clearly and in correct English**?
 - You'll also get comments on each item, and an outline of your essay
- When you also **receive a review by a TA**: only the TA evaluation matters for your grade
- When you are evaluated **only by peers**: each of your peer grades will be weighted in proportion to our estimates of your peers' **dependability** as graders
 - If you disagree with your grade **you can appeal**, and a TA will re-grade your essay
- Essays are worth **increasing amounts** as the term goes on
 - your first 3 essay grades will be scaled by 0.6;
 - your next 4 essay grades will be scaled by 0.8;
 - your final 4 essays will be scaled by 1.0.

Peer Review

1. Calibrated peer review

Grading essays from previous years that we've graded already

- Confirms that we all **understand the grading scheme** in the same way, and shows you examples of weak and strong essays

2. Supervised peer review

Grading essays from this year when you haven't yet demonstrated proficiency at peer review

- A **TA will grade the same essays**, and only the TA grade will count
- The TA will also assess whether you made **thoughtful comments**

3. Unsupervised peer review

Grading essays from this year once you've demonstrated proficiency

- Your review may be **spot checked or appealed**: checked by TA
 - Spot checks: very positive ratings; severe disagreements; random
- We'll update your dependability score based on your degree of agreement with peers (taking their own dependability into account) and, when available, degree of agreement with TAs

Estimating Dependability

- We maintain estimates of each peer grader's “**dependability**” via Bayesian inference
 - The key idea is that calibrations and assignments graded by TAs give us information about which **graders are more reliable**
 - we then bootstrap this knowledge to decide how much to trust each grader on assignments that were **not graded by a TA**
- Your dependability score is our estimate of ***effort * (1/variance)***
 - **effort** is (1 - probability that you assign some value near the class average without considering the essay)
 - **variance** is your tendency to differ from true grades
- The system starts out with the assumption that all students have **low dependability scores** (specifically, low effort and high variance)
- As you grade assignments/calibrations, we **update these beliefs**
 - doing **more calibrations** both helps you get better at grading and gives us evidence to counteract the system's pessimistic initial belief
 - if you always assign values close to **the class average**, we'll conclude that you have low effort probability
 - you need to properly identify both strong and weak assignments in order to achieve a high dependability score
 - if you grade **too harshly or too generously**, we'll conclude that you have high variance

Peer Review: Reviewer Perspective

- Do **at least 3 calibrated reviews** (more the first week; can always do more)
 - Week 1: this means everyone!
 - Week 2+: only if required
- Do **assigned reviews of others' essays**
- How we'll calculate **your peer review grade**
 - **Scaled dependability scores**, snapshotted each week
 - We'll scale your peer review grades like your essay grades:
 - your first 3 peer review grades will be scaled by 0.6;
 - your next 4 peer review grades will be scaled by 0.8;
 - your final 4 peer review grades will be scaled by 1.0.
 - If you don't do all required reviews (peer reviews; calibrations when required) your dependability-based grade will be **scaled down**; see web page for formulas

In Class Attendance and Participation

- **Active participation** in the class is a key element of this course
 - “**Flipped classroom**”: lectures don’t focus on transmitting information
 - Instead, they focus on **interaction, discussion and critical analysis**
- Participating in **class discussions** contributes to your participation grade and reduces your peer grading workload:
 - Starting next week, we’ll use **Mechanical TA** to adjudicate in-class discussions
 - If you want to contribute to a discussion, you click a button to **raise your hand**
 - Every time I call on someone
 - **one student** with a raised hand will be randomly selected to respond
 - **every student** who had a hand raised will be recorded for participation purposes
 - Every class you raise your hand at least once will reduce your following week’s peer grading quota by 2
 - If you attend every class and raise your hand exactly once per class, you’ll have to peer grade 3 essays per week instead of 7

Calculating Your 15% Participation Grade

- **Raising your hand** (even if you are not called to speak) counts as participating
- If you're **chosen to speak**
 - you will probably **not be chosen** to speak again during the same class
 - unless the only hands raised are from students who have already spoken
 - you'll be **counted as having raised your hand** for the remainder of the class

Raise your hand this many times	Get this many points
0	0
1	5
2	6
3	6.5
4	7
The median among students who participated at least once	8
The maximum among students who participated at least once	10

*Linear interpolation
(see website)*

How participation affects your grade

- Severe **consequences** for trying to game the system
 - If you clearly just raised your hand for points rather than to contribute to the discussion, you'll get **zero points for the entire day**
 - regardless of how many other points you might have been awarded earlier that day
 - If you use MTA to raise your hand while **not physically present in the class**, this will be treated as a case of **academic misconduct** and serious penalties will apply
 - TAs will be able to see a real-time list of which students have put their hands up along with their UBC Card photos, and may verify physical attendance even for students who are not called upon

“What if something goes wrong, and I can’t submit an essay/review?”

- We'll **drop your worst two essay and peer review grades**, allowing for cases where:
 - you miss the (firm) deadline
 - you're sick, out of town, have a conflict with another course, ...
 - you face hardships due to the pandemic
 - you register for the course late
 - you get a poor grade on one essay
- (We'll renormalize your grades accordingly)
- We'll also **drop the 4 classes in which you have the lowest participation grades**
 - Other extensions or waivers will be granted only in **truly exceptional circumstances**
 - Unless you have an exceptional excuse, you'll simply get a grade of zero
 - (Brief) illness isn't an exceptional excuse, see above
 - Registering in the course late isn't an exceptional excuse
 - If you're on the waitlist, start actively participating now!

What if I'm on the wait list?

- Historically, most people on the wait list **get into the class**
 - but it's not up to me, up to undergrad advisors in the main office
- Main office will prioritize the wait list by **participation in the course**
 1. **highly active participants** (ordered by standard waitlist priority)
 2. **fairly active participants** (ordered by standard waitlist priority)
 3. students who have participated **little or not at all** (won't get in regardless of priority)
 - make sure you hand in each week's work
- **No reduction in required course elements** for having been on wait list
 - wait list registrants should be able to access MTA
 - if you have troubles, let us know!

Will Classes Be Recorded?

- Please **come to class** instead of watching a video!
 - Frankly, we don't think watching a recording is a great way to gain value from a class that we've designed to emphasize **interaction**
 - We will work hard to make classes into a **good use of your in-person time**, and that's how we recommend that you engage with them
 - Presumably you didn't enroll at UBC to stay at home and watch videos...

Academic Honesty

- Students are expected to acknowledge ideas generated by others and to uphold the highest academic standards in all of their actions
- **Plagiarism is a serious offence** and will be dealt with harshly
 - Plagiarism is the **unattributed use** of any external source (e.g., another student, a web site, a book) in work for which a student takes credit, or the **inappropriate use** of any external source whether or not attribution is made
 - The seriousness of the offence depends on the extent to which the student relied upon the external source
 - You must **cite all external sources** that you use, and **write in your own words**
 - Any text that you take verbatim from another source must be in **quotation marks** and followed by a citation
 - We will use TurnItIn (an online commercial service) to **detect plagiarism** including the resubmission of essays used in previous offerings of this course

Staying Safe

- **Vaccination:** [free vaccines are available on campus](#)
 - higher rate of vaccination in our community overall = less transmission
- **If you're sick, please stay home, no matter what you think you've got (e.g., cold, flu, other)**
 - Do not come to class if you have Covid symptoms, have recently tested positive, or are required to quarantine
 - In this class, the marking scheme provides flexibility so that you can prioritize your health and still succeed
- **If you are sick on a final exam day, do not attend the exam.**
 - You must apply for deferred standing (an academic concession) through Science Advising no later than 48 hours after the missed final exam/assignment

Course Demos

Ed Discussion



 Hint

The MTA Student Enrol code for the 2024_S1 term is: **aurora100**.

You can login to MTA by visiting: mta.students.cs.ubc.ca.

Perusall

Note

Students can enrol into Perusall using this enrol link: <https://app.perusall.com/join/moosvi-n8x4l>.

PrairieTest

Course Topics Activity

Small Groups

Networked Communications	Intellectual Property	Information Privacy
"Any social network that employs moderators should be required to make it impossible to share posts flagged as false." 1: for; 10: against	"The government should aggressively prosecute intellectual property infringement, particularly including peer-to-peer file sharing." 2: for; 11: against	"It should be illegal for shopping malls to install cameras for tracking customer behavior." 3: for; 12: against
Privacy and the Government "It should be illegal to sell a mobile phone that cannot be decrypted by the police if so ordered by a court." 4: for; 13: against	Computer and Network Security "Canadians should be able to vote online in federal, provincial and municipal elections." 5: for; 14: against	Computer Reliability "Self-driving cars should be allowed to operate on public roads once they have been shown to be at least slightly safer than the average human driver." 6: for; 15: against
Professional Ethics "Computer scientists and data scientists should not aid in the development of autonomous weapon systems." 7: for; 16: against	Work and Wealth "The activity of a company's employees on their computers, such as what applications they have opened and for how long, is private and should never be tracked." 8: for; 17: against	Artificial Intelligence "Contents generated by artificial intelligence systems (e.g., ChatGPT, DALL-E 2) that require minimal human input should not receive copyright protection." 9: for; 18: against

Networked Communications

“Any social network that employs moderators should be required to make it impossible to share posts flagged as false.”

Intellectual Property

“The government should aggressively prosecute intellectual property infringement,
particularly including peer-to-peer file sharing.”

Information Privacy

“It should be illegal for shopping malls to install cameras for tracking customer behavior.”

Privacy and the Government

“It should be illegal to sell a mobile phone
that cannot be decrypted by the police
if so ordered by a court.”

Computer and Network Security

“Canadians should be able to
vote online in federal, provincial
and municipal elections.”

Computer Reliability

“Self-driving cars should be allowed to operate on public roads once they have been shown to be at least slightly safer than the average human driver.”

Professional Ethics

“Computer scientists and data scientists
should not aid in the development
of autonomous weapon systems.”

Debrief

Reminders before next class