

CPSC 430

Computers & Society



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Class 1 !!

Dr. Firas Moosvi | 2024_S2

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
1. Break
2. Course Topics Activity (20 mins)
3. Debrief (10 mins)
4. 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



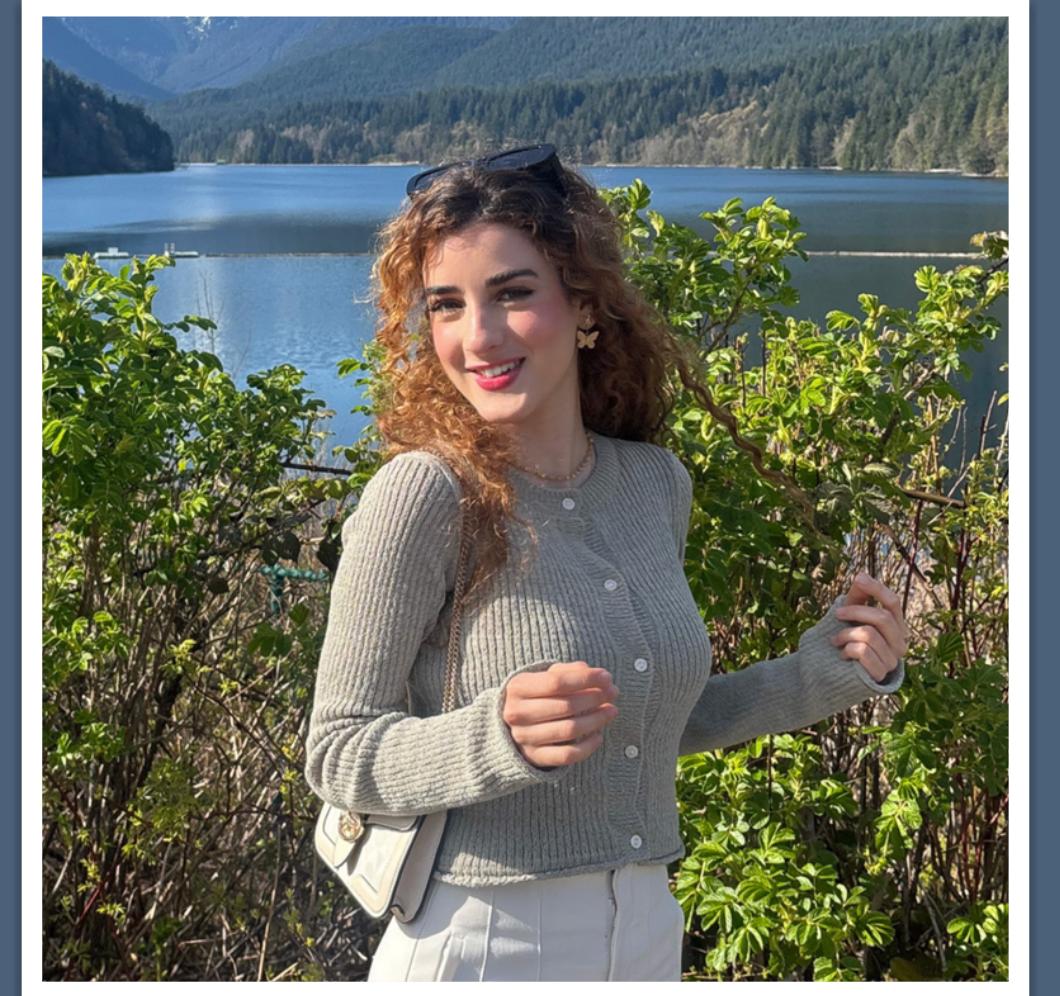
Mobina Shahbandeh



Justin Rahardjo



Rina Forristal



Maissan Bazazeh

Victoria Wu



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.

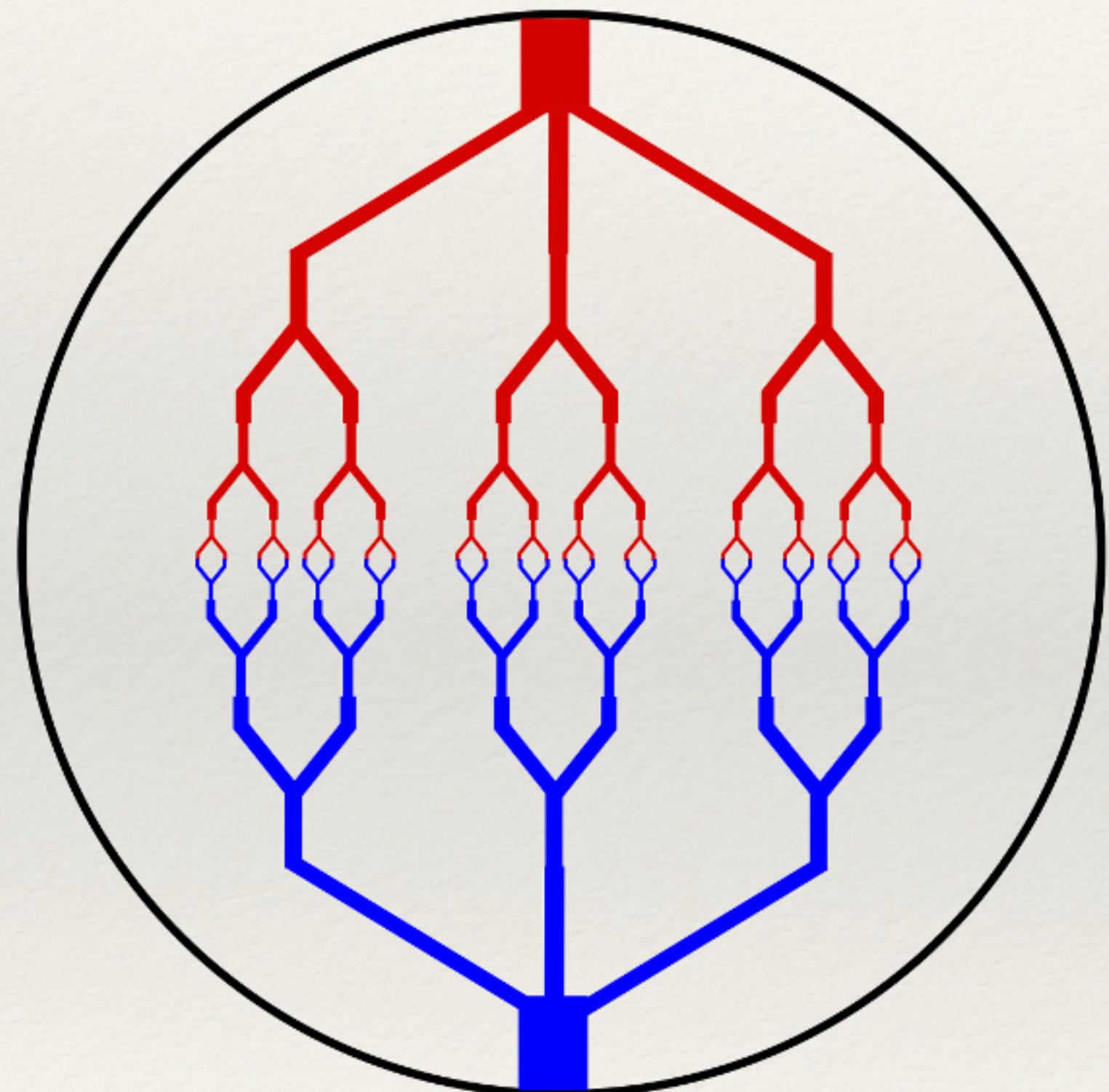


Alternative Grading

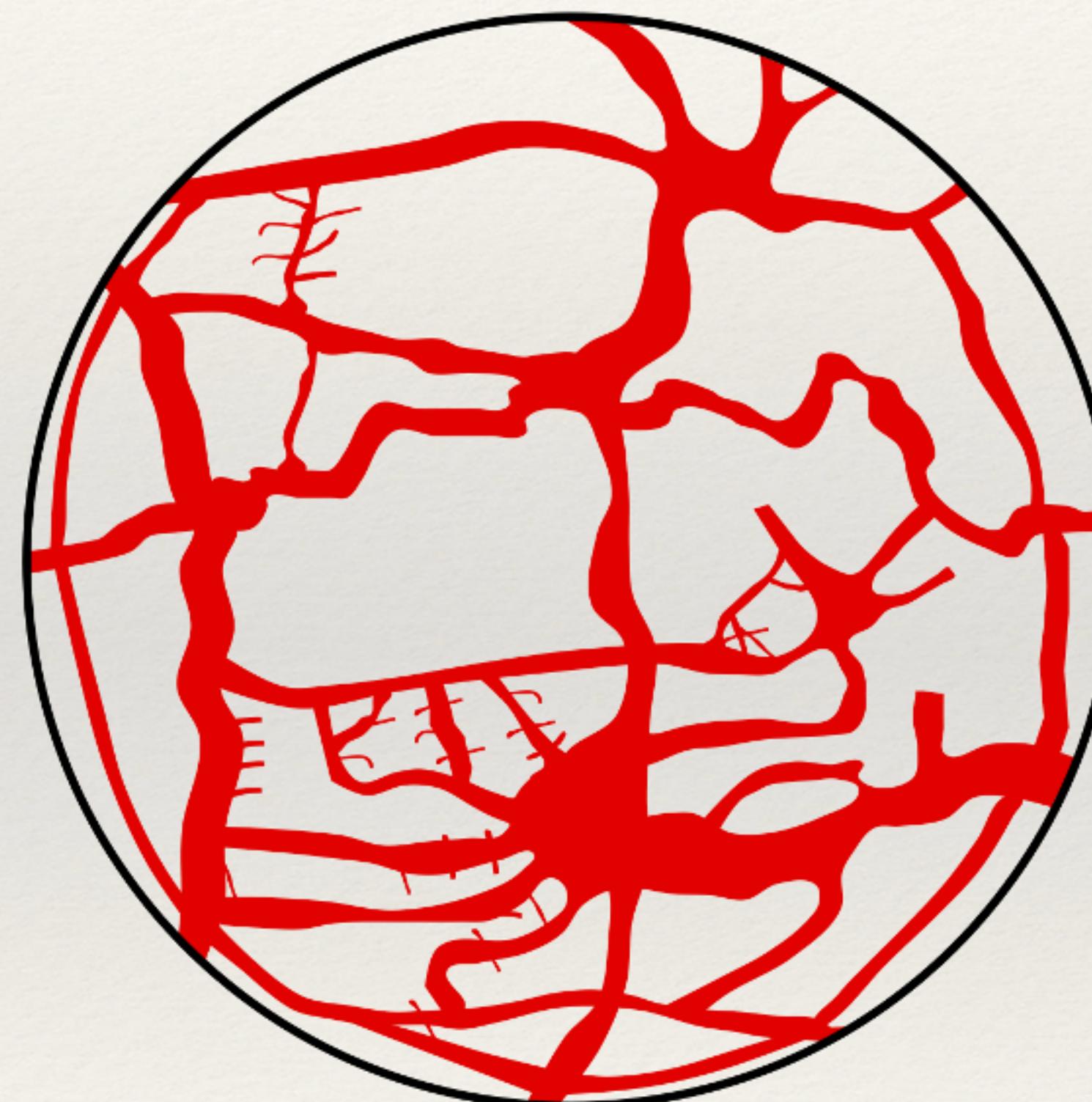
Challenging the systems and structures associated with traditional grading in higher education.

Implications of abnormal tumour vasculature

Normal blood vessels



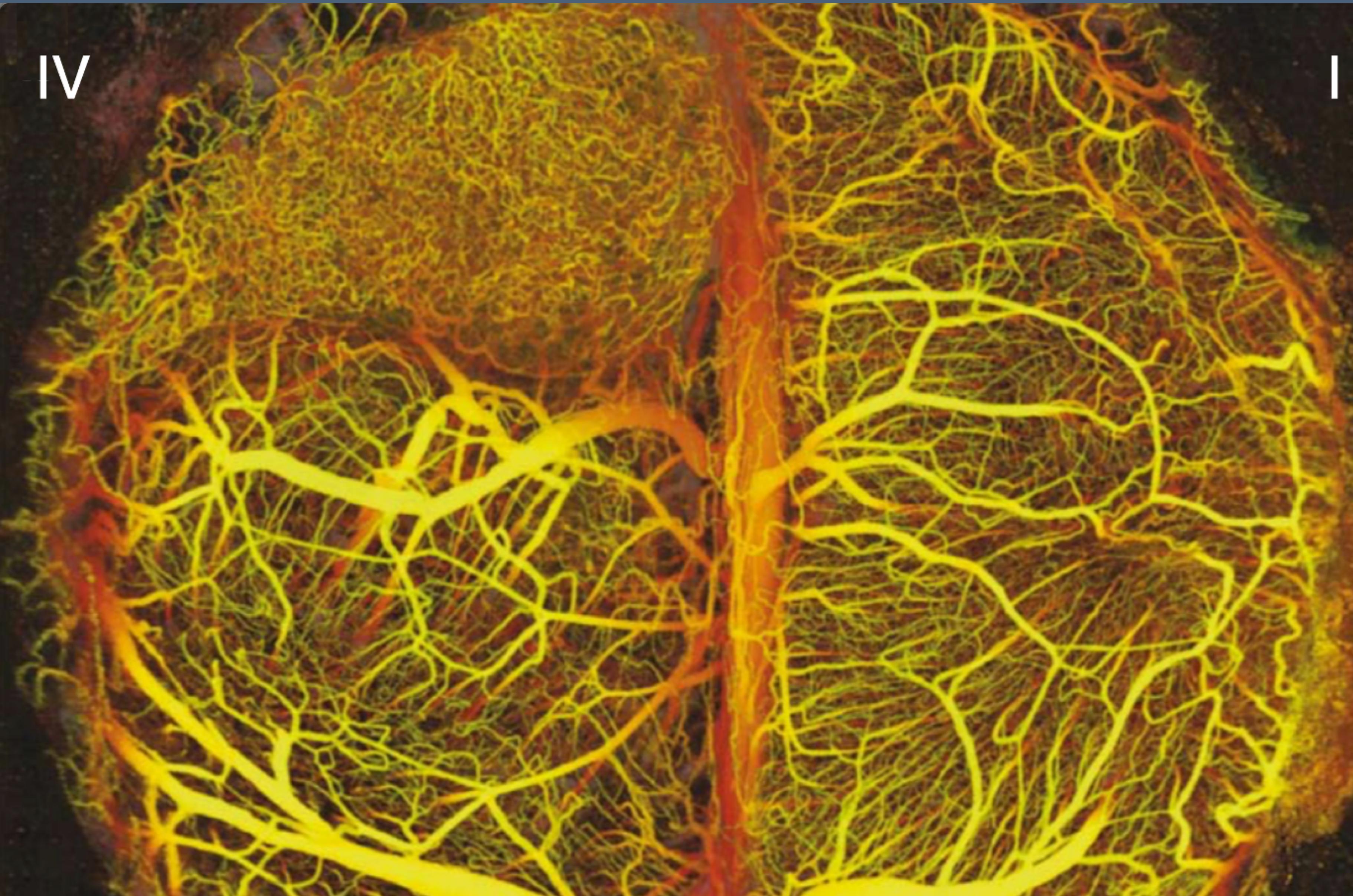
Tumour vessels



- ▶ 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

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 us, 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, Ed Discussion
 - if you have troubles, let us know!

COURSE LOGISTICS

All the basics you need to know to get started

ESSAYS, PEER REVIEW, AND PARTICIPATION

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

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.

Grading Scheme

Essays (10 x 5%)	50%
Peer Reviews (10 x 3%)	30%
In-class participation	20%

- The course emphasizes **making arguments and engaging with arguments made by your peers**
- **We don't have a final exam, but that means each assessment is worth a lot!**
- This is **not an easy course—something to hand in every class**
 - On the other hand, you'll learn a lot, and students who work hard throughout the term can expect to do well

Essays

- Will be conducted in the Computer-based Testing Facility
- Students will book a slot in the CBTF over a period of a few days
- For each essay:
 - Do assigned readings of up to one chapter from the textbook. Readings posted at the course website
 - Take a multiple-choice quiz online to test your comprehension of the chapter you read
 - 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 5 peer reviews of others' essays

Resubmissions

- **Will be conducted in the Computer-based Testing Facility**
- **Students will book a slot in the CBTF over a period of a few days**
- **For each Resubmission:**
 - You must have done the initial Essay submission: in other words, you do not qualify for resubmissions if you did not complete the initial essay
 - You will need do a short (2-marks) reflection exercise to explain what you changed, why and self-evaluate
 - Resubmissions are guaranteed to be graded by TAs.
 - Your mark on the Resubmitted essay can go up or down. In 2024S1,
 - 83% of resubmissions resulted in higher scores, on average +10%
 - 17% of resubmissions resulted in lower scores, on average -8%
 - Usually happened due to lack of effort on the resubmission, sometimes because peers gave higher grades than expected

Grading Your Essays

- You'll receive 5 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

Grading Your Essays

- Sometimes, you will also **receive a review by a TA**: if so, only the TA evaluation will count 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 either **do a resubmission** (with changes and reflection) or **you can appeal**, and in either case, 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 3 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 8 calibrated reviews** (can always do more)
 - Essay 1: Everyone!
 - Essay 2+: only if “supervised”
- Do **assigned reviews of others’ essays**
- How we’ll calculate **your peer review grade** (30% of the course):
 - **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 3 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

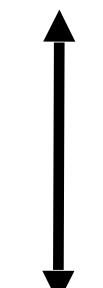
- **Active participation** in the class is a key element of this course
 - “**Flipped classroom**”: lectures don’t focus on transmitting information
 - Instead, they focus on **interaction, discussion and critical analysis**
- Participating in **class discussions** contributes to your participation grade:
 - 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 we 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

Calculating Your 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	
The maximum among students who participated at least once	

*Linear interpolation
(see website)*



How participation affects your grade

- Severe **consequences** for trying to **game** the system
 - 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
 - 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

“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 register for the course late
 - you get a poor grade on one essay(We'll renormalize your grades accordingly)
- We'll also **drop the 3 classes in which you have the lowest participation grades**
- Other extensions or waivers will be granted only in **truly exceptional circumstances**
 - If you find yourself in distressful circumstances that may impact your performance, reach out soon
 - For normal cases, 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!

Calendar

Task	Due Date	CBTF	Window
Essay 1	Monday at 6 PM	Yes!	Thurs-Mon
Peer Review 1	Wednesday at 6 PM	No	Approximately Monday evening to Wednesday evening
Resubmission of Essay 1	Friday at 6 PM	Yes!	Wed-Fri
Essay 2	Friday at 6 PM	Yes!	Mon-Fri

Calendar

July 2024

Sun	Mon	Tue	Wed	Thu	Fri	Sat
30	Jul 1	2	3	4	5	6
		E0 Window	E1 Window	• E0 6 PM		
7	8	9	10	11	12	13
E1 Window	E2 Window • E1 6 PM • PR0 6 PM	E1 Resubmission Window		• E2 6 PM		
14	15	16	17	18	19	20
E3 Window	E4 Window E2 Resubmission Window • E3 6 PM • PR2 6 PM	E5 Window		• E4 6 PM		
21	22	23	24	25	26	27
E5 Window	E6 Window E4 Resubmission Window • E5 6 PM • PR4 6 PM	E7 Window		• E6 6 PM		
28	29	30	31	Aug 1	2	3
E7 Window	E6 Resubmission Window E8 Window • E7 6 PM • PR6 6 PM	E9 Window		E10 Window		
4	5	6	7	8	9	10
E10 Window	E9 Window	E10 Resubmission Window		• PR10 6 PM		
		E8 Resubmission Window • E9 6 PM • PR8 6:15 PM	E9 Resubmission Window • E10 6 PM • PR9 6 PM			

Course Demos

Ed Discussion



Hint

The MTA Student Enrol code for 2024 Summer Term 2 is: **argentina100**.

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

Perusall



Note

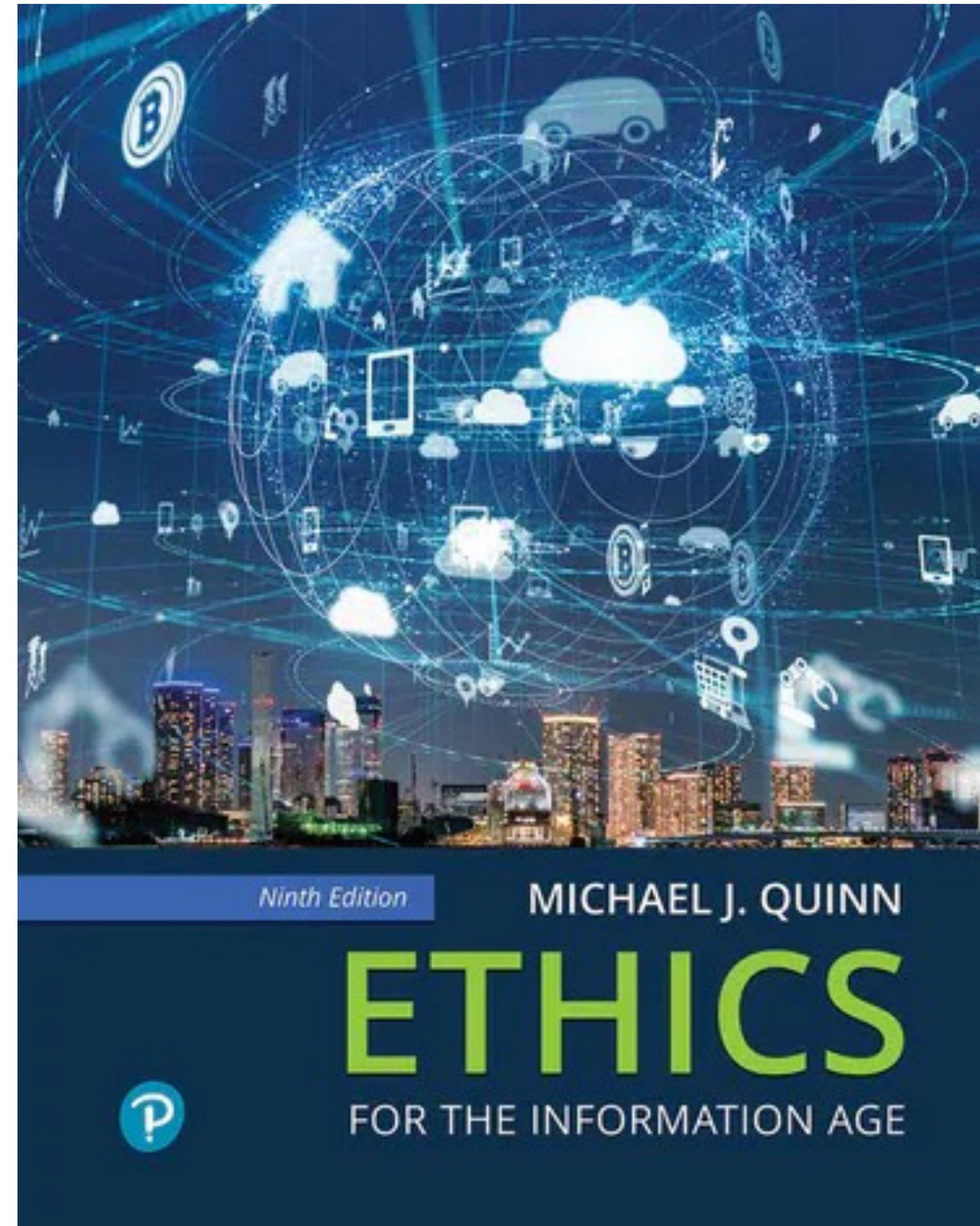
Students can enrol into Perusall using this enrol link: <https://app.perusall.com/join/moosvi-2u4a4>.

PrairieTest

Course Topics Activity

Textbook

- We will be using the textbook *Ethics for the Information Age, 9th Ed*, by Michael J. Quinn.
- It's important that you have a copy, because we'll be reading the whole thing
- Old editions exist, but you're responsible for all material in the 9th edition.



Topics (pretty cool stuff, actually 😊)

- Writing and argumentation, History of computing, storage, networking (next 2 classes)
 - Ethics & Argumentation (4 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.

Small Groups

Networked Communications	Intellectual Property	Information Privacy
<p>“Any social network that employs moderators should be required to make it impossible to share posts flagged as false.”</p> <p>1: for; 10: against</p>	<p>“The government should aggressively prosecute intellectual property infringement, particularly including peer-to-peer file sharing.”</p> <p>2: for; 11: against</p>	<p>“It should be illegal for shopping malls to install cameras for tracking customer behavior.”</p> <p>3: for; 12: against</p>
<p>Privacy and the Government</p> <p>“It should be illegal to sell a mobile phone that cannot be decrypted by the police if so ordered by a court.”</p> <p>4: for; 13: against</p>	<p>Computer and Network Security</p> <p>“Canadians should be able to vote online in federal, provincial and municipal elections.”</p> <p>5: for; 14: against</p>	<p>Computer Reliability</p> <p>“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.”</p> <p>6: for; 15: against</p>
<p>Professional Ethics</p> <p>“Computer scientists and data scientists should not aid in the development of autonomous weapon systems.”</p> <p>7: for; 16: against</p>	<p>Work and Wealth</p> <p>“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.”</p> <p>8: for; 17: against</p>	<p>Artificial Intelligence</p> <p>“Images generated by artificial intelligence systems (e.g., DALL-E 2) that require minimal human input should not receive copyright protection.”</p> <p>9: for; 18: against</p>

Debrief

Reminders before next class