THE IRON WARRIOR

F2025 Issue 2

MEET THE TEAM

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Letter From the Editor: The Bomber is Back

Julia Suljak, 4A Chemical

Hi readers!

Hopefully you're all settled into your new term routine by now. Our yearly club fair appearance was a success, and we've welcomed some new members who have contributed comics and puzzles to this issue. We also have a very important discussion about campus walking etiquette, and we've brought back a historical IW column with our first Point vs. Counterpoint since 2021. Remember when you read it that it's a debate that was just for fun! Finally, make sure to take a look at the winning photos from our OWeek contest. Congrats to the winners and thank you to all who submitted!

When I started writing for the Iron Warrior, my dad — who is not a UW alumnus or an engineer — suggested an article idea to me called, "Memories of the Bomber." For those of you who don't know, there used to be a WUSA-run pub in SLC called the Bombshelter (aka the Bomber) which ran for over 40 years before shutting down in early 2019. He suggested an article asking alumni about their favourite memories from the pub, but I never saw the relevance of it because it's unlikely that any current undergrad student would know of the Bomber. However, that has changed...the Bomber is back!

WUSA email-blasted everyone back in August with the announcement, but it was also reported by Imprint in July. It's open now while WUSA finishes the remaining student lounge renovations with daily bar service (which for some reason ends at 5pm...), food, the ability for clubs to book the space, and 1-2 monthly bar nights throwing back to the Bomber of old.

So, in honour of the Bomber being back, I thought it would be fitting to finally do something with that article idea. I was able to get some alumni to share their favourite memory from the Bomber during their time at UW, and I've included their responses here. I personally had a fun time looking through them. Thanks to all the alumni who shared a story with us!
~ Julia (Editor-In-Chief)

What's your favourite memory from the Bomber during your time at UW?
"I had a LOT of great times at the Bomber - celebrating birthdays with a special mug, great concerts with local and national bands, spring terms on the patio, and of course, legendary Bomber Wednesdays. It's hard to pick just one favourite memory. I will always remember the Bomber as a welcoming place where you would always be bumping into people you knew (even if it was just waiting in the massively long lines through the SLC). One question, now that the Bomber is re-opening - are all the lifetime bans now rescinded? Some people probably need to know!"
- Peter Johnson, REC/GEOG '02

"The Comfort of a Familiar Drink Order: When I think about my years at Waterloo, so many memories float to the surface—countless lectures, group projects, late-night study sessions—but the ones from the Bombshelter hold a special place in my heart. I couldn't possibly pick a single favorite moment there; it's more like a patchwork quilt of little experiences stitched together over time. But if I had to choose something to share, I'd go with one that's more cute than epic.

For many terms—probably stretching across all of third and fourth year, and even into my extra 3N term when I was taking a mix of arts courses and a few higher-level engineering ones—I developed a quiet little ritual. On busy Wednesday nights - without fail - this one waiter would catch my eye and give a small wave. He always seemed to remember my strange, very specific drink order: gin and Diet Coke. A weird drink order - and a dollar tip on a $2.40 drink - meant I would have my drink waiting for me right as I passed the "bouncer" to be let in.

Sometimes, if the line was long, he'd pass it to me mid-wait, almost like a secret handshake in beverage form.
It made me feel welcome :)"
- Derrek Lennox, ME '95

"Favourite Memory of the Bomber: playing our last show during TalEng95 at the Bomber in the spring of 1995, just before graduating. We (Rollickin' Good Times Punk Rock BANNED) played our last show, and wanting to go out with a bang even rented some proper amps etc. We were 2nd to last on the bill, and had a bit more material than our allotted slot :=) The fans loved it, but the organizers shut down the power on us at some point. The fans did not like it. Some "slight altercations with Campus Police" ensued, and the Bomber needed to replace a bit of furniture. We had to go get our instruments & gear from the Campus Sheriffs and were "strongly advised" to not play on campus again if we were planning on graduating. A fitting sign-off for "the BANNED". Glad to hear of the reopening, tried to show the spot to my 18yr old son during homecoming weekend this year, but it was closed at the time. Cheers from Germany!"
- Leif Reinhold, ME '95

"I don't recall any crazy stories, but I spent a fair bit of time there. I mostly remember pitchers, friends, good times, and wooden tabletops."
- Stephan "Schwag" Schweighofer, ME '96

"Taking tequila shots on the patio for my 19th birthday during 1B summer term!"
- Linea Miller, ENVE '20

Photo Credits: Julia Suljak. The Bombshelter has returned to SLC!

PCP: Exam or Final Project?

Point: Why Final Projects are Better Than an Exam

Tamika Brown, 1A Mechatronics

Have you ever thought about how exams just suck? Cramming in studying up until the last second just to realize you haven't learned anything from class- and now, you're retaking Calculus II. The way our exams evolve into final projects are a great thing to retain the information and pass that class.

As a first year Mechatronics student, I will be doing a final project in Mechatronics Engineering 100 (MTE 100) and Digital Computation (MTE 121). The final project will combine the learning we're doing in both. You may ask; "How does this show the students' learning?" The answer lies in the way projects bring together knowledge, skills, and creativity.

Coming from a STEAM high school, I often had final projects over final exams. This allowed us to integrate the learning we did in the classroom into real life problems. This fostered critical thinking and problem solving, creativity and innovation, collaboration, and inclusive learning for all. We all learn differently, and projects showcase it.

Exams often test short term memory under pressure, while projects require students to apply the knowledge from class and build solutions. Project work leads to long term understanding, which means it will be easier to build on rather than learning for an exam, then forgetting. Exams in a bright room, people coughing or sneezing, the scratching of their pencils; it isn't the most optimized space for test taking.

It's shown that students would prefer projects over exams. It may take longer but they feel like they're actually engaging in the topic. Dr. Kelleher stated that, "positive emotions play a crucial role in performing well in finals." If you are under pressure and feel stressed, you will not perform as well as you did while you studied because you feel a negative emotion. On the other hand, when you have a final project, you can do something you're actually passionate about in the class.

Engineers aren't judged in their careers by how well they recall formulas in silence; they solve open-ended problems with resources and collaboration. Projects encourage thinking outside the box; there isn't just one right answer, which better reflects their future career. There are endless solutions for the same outcome. Projects can also reduce stress and increase engagement with the subject you're learning.

The typical exam is designed to be completed with significant time to spare for the students who learn the material a certain way. Projects are a way to have all minds be able to complete it. Projects are a way to plan and team up on learning. Engineers never work alone; learning to navigate different team dynamics is part of professional growth. With group projects, peer evaluations and structured grading can reduce freeloading from partners. Working in a group also means you can share the load. Everyone has other commitments, but if you share the load, you can get it done more efficiently.

Overall, final projects are less stressful and are a better option even if they're a bit more work. Final projects don't just measure what students know in the moment; they reveal how they think, collaborate, and create rather than having students memorize their way through an exam. They prepare us for real-world challenges in a way exams simply cannot.

References:
Makersmuse. (2024, December 9). Top benefits of implementing STEM Labs in schools. Makers' Muse. https://makersmuse.in/blog/what-are-the-key-benefits-of-implementing-stem-labs-in-schools/
Final exams VS. projects. The Mane News. (2024, June 2). https://manenews.com/2024/06/04/final-exams-vs-projects/

Photo Credits: Tamika Brown (made in Canva). Projects PCP.

PCP: Exam or Final Project?

<u>Counterpoint</u>: Why Final Exams are Better Than a Project

Avi Bhadore, 4N Computer

Testing is a pain. Nobody likes having (typically) the majority of their grade, the numerical manifestation of their academic success, determined by an arbitrary paper they are given a couple hours to complete. On the other hand, the school needs some way to assess whether a student has put in sufficient effort in their learning, otherwise it'd be little more than a diploma mill.

Final exams are born out of necessity, and are the most practical approach to testing a student. Everyone in a class gets the same exam, and grading can be done quickly and fairly objectively, at least compared to alternative approaches. The amount of content in the exam is within a certain range, as it must be completable within a time limit. This is to the benefit of students, as the typical exam is designed to be completable with significant time to spare. The system is also flexible; the professor can prioritize broadly testing main ideas from every week, or ask deep questions from random topics. Some exams may prove too difficult, but curving allows for this to be compensated for after the fact.

Photo Credits: Avi Bhadore (made in Photoshop). PCP Pro Final Exam.

There are also improvements in overall learning from this method. Final exams are designed to encourage students to review their courses weekly. Spaced repetition is shown to be one of the best ways of absorbing information in the long term, as any user of Duolingo or Anki could tell you.

The main alternative to the final exam in engineering, mostly found in upper year courses, is the final project. Critics of exams may argue that the workload at the end of the term is too high and that exams make for a poor way to assess learning. After all, students can memorize their way through, or simply get unlucky when the questions on the exam don't align with what they studied. However, the issues that exist with exams aren't nearly as bad as the problems with its main alternative!

You can write a test for any course, because there are many types of questions that can be asked in a test. The possible scope of projects a student can be expected to create given the content in a course is much, much tinier. Often, this means final projects depend on knowledge that was not well covered in lectures.

To compensate, students are usually given the project earlier in the term, but this time is almost always squandered because there is always a more immediate deadline. Unlike an exam that is designed to be taken in a few hours, a project can take a completely unknown amount of time. Typically this means a big cram at the end, with prayers that the project topic is a part of the course that was well taught. A student can walk into an exam having partially studied the content and receive partial marks - a partially completed project is worth nothing.

Given the greater difficulty in marking a project compared to an exam (programming courses excluded), these are often group endeavors. Group projects are a nightmare: almost always, some students (those desperate to do well) must carry those that just care about passing. This is terrible for judging performance, as now the student's grade also depends on their ability to find hard working classmates. Working in a group also blows up any chance of starting the project early, as everyone always has other commitments. At the very least, some great friendships have also formed through the tried and true last day project grind.

All in all, final exams have their issues, but reign supreme because they are the easiest to implement and most versatile way to test students. Though there are ways to execute on them better, it'd be better to stick to them than to try and give students more projects at the end.

Mechanics of Machine Learning

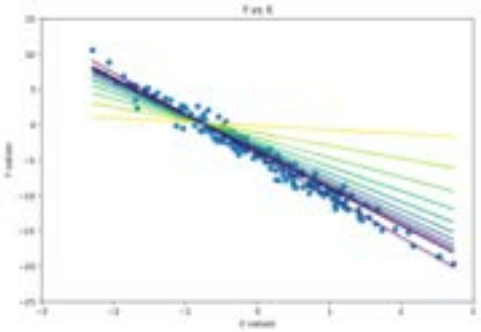
Aadi Umrani, 3B Biomedical

All intelligent life on Earth learns through association. From the moment a baby recognizes a face, to a bird realizing that a rustle in the grass may mean food, intelligence is built on patterns. We associate cause with effect, input with outcome, experience with expectation, and this forms the core of the learning process. Associative learning is a fundamental process where two events become linked in memory, creating a new response. Machine learning works in much the same way. Instead of the nerves and emotions, computers rely on numbers and algorithms, but the essence remains the same: learning from patterns in data. These models are designed to uncover associations and use them to make predictions. Some of them learn by asking simple yes or no questions, some by drawing lines through data, and others by mimicking the layered reasoning of the human brain.

The simplest way a computer can "think" is through a yes or no split, called a decision stump. Linking many of these together forms a decision tree. Each branch of the tree represents a question about the data, eventually leading to an output at a leaf. In real-world datasets, there are often many features, and not all of them line up neatly with a single tree. To decide which question to ask next, trees use measures such as entropy, which reflects how random the data is, error rate, which measures inaccuracy, and mutual information, which captures how much knowing one feature helps predict another. In this way, decision trees grow by reducing confusion, minimizing mistakes, and asking the most informative questions first.

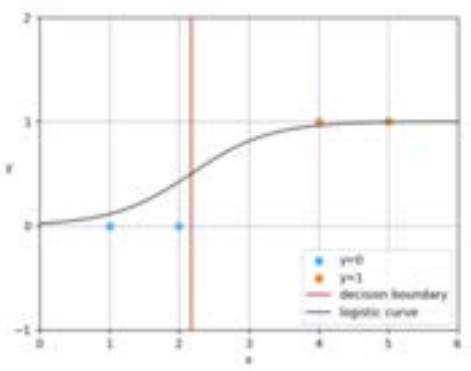
Photo Credits. MindManager Blog. A decision tree. https://blog.mindmanager.com/wp-content/uploads/2022/03/Decision-Tree-Diagram-Example-MindManager-Blog.png

Sometimes, the best way to understand a relationship is to draw a straight line through it. That is the idea behind linear regression. It is a model that tries to capture how one variable may affect another variable. It allows the user to use multiple continuous variables to predict a target value with high precision. There are multiple ways to train a linear regression model. One possible way is using gradient descent. This method starts with an initial guess for the model's parameters and repeatedly adjusts them to minimize the loss, which is the inaccuracy of the model. At each step, we calculate the gradient, which tells us how to change the parameters to reduce the error. By moving in the direction that decreases the loss, the model gradually improves its predictions. For very large datasets, stochastic gradient descent is often used, which updates the model using one data point or a small batch at a time to make learning faster. Polynomial regression extends linear regression by allowing the model to fit curved relationships. It does this by adding higher-degree terms like x^2, x^3, and so on, which lets the line bend to capture more complex patterns. This increases the risk of overfitting though, especially with high-degree polynomials, so it's important to balance complexity with generalization.



Evolution of the "line of best fit"

Sometimes we just want a yes or no probability distribution. This is where logistic regression comes in. Logistic regression handles these cases by transforming the linear combination of features through a nonlinear activation function, often the sigmoid curve, which compresses any input into a probability between zero and one. So, logistic regression builds on the ideas of linear regression but adapts them for classification tasks. The process starts by looking at the input features, such as grades or attendance, and combining them using the model weights. This scales up the features differently, meaning features having more influence on the output get a higher weight. The activation function then transforms this score into a probability. There are different activation functions to choose from, like the Sigmoid, Tanh, ELU, and ReLU, and each one of them has their own uses. Training the model involves adjusting the weights to make better predictions. Again, gradient descent can be used for training. The trained model weights can be used to predict new outcomes and see the probability of the predicted outcome.



Logistic regression decision boundary and the sigmoid curve

Logistic regression is powerful for binary decisions, but what if the data is too complex for a single curve to capture? That is where we use neural networks, models which mimic the layered thinking of the brain. At their core, these are just stacks of logistic regression models, which are present as neurons in the hidden and the output layers. Ideally, according to the Universal Approximation Theorem, all functions can be plotted with a 1-hidden layer neural network with a 0% error, given there exists an enough number of neurons, and the right activation functions. In a typical 3-layer network, the input layer takes in the input values, scales them up differently by the corresponding weights, and then applies a non-linear activation function to the weighted inputs to get to the hidden layer neurons. These neurons are then scaled up by their weights, and passed through a softmax function,

which returns the probability distribution of all the classes. This is called forward propagation, through which we can calculate the loss of the neural network function. We can also calculate the gradient of the network by using the chain rule to find the derivative of the neural network's overall function. This is known as backward propagation. Both forward and backward propagation can be used to train the model using the gradient descent algorithm. The trained model weights can then be used for predictions. A commonly used subset of neural networks is the convolutional neural network (CNN). CNN layers use filters that slide across the data, learning to detect local features such as edges, textures, and shapes. These features are then combined into increasingly complex patterns across deeper layers, which makes CNNs especially effective at tasks like image classification and facial recognition.

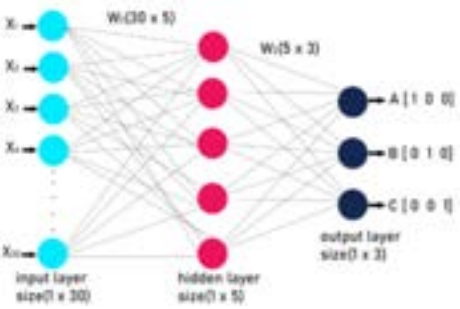


Photo Credits: Architecture of a 3-layer neural network https://media.geeksforgeeks.org/wp-content/uploads/20200522110034/NURELNETWORK.jpg

In essence, facial recognition models, which are built on convolutional neural networks, which are a subset of neural networks, which are hierarchies of logistic regression models, which are an extension of linear regression, recognize faces through the simple act of drawing lines through data.

Loco Sudoku

			3			9		
	5						3	
		5						
	2				8	3	1	
3	1			7				
4		3	5					7
	9		1		3			
5						8		
		2					7	9

SUDOKU
#2025-17

You're Bad At Walking

Cathy Quan, 4A Life Physics

Do you remember when you were in high school trying to get to class only to be stuck behind the slowest paced individuals? For some of you that could have been a few months ago and now you're here, stuck behind not a small group of people in a hallway but a herd of students coming from all directions blocking you. Let's leave that behaviour in high school halls.

Let me tell you guys a story. I was walking to the library on campus after one of my classes and had to go down this very wide set of stairs. I was on the very right side of the stairs beside the railing and about 3 small groups of people started walking up. I thought since I was flush to the right railing they would, I don't know, MOVE OVER? Nope! I somehow migrated to the complete left side of the stairs because they were walking into me. What happened to walking on the right like when we drive? At least if you aren't going to move, walk straight so I can mind my business and walk past you. There's no need for you to walk diagonally into me. With the amount of times this happens I'm surprised more people don't just body each other constantly; assert dominance.

There are also tons of students who have back to back classes, commonly only 10 minutes apart. Most of the time they need to walk to the opposite side of campus. Professors going overtime, time packing up, trekking, god forbid they get stuck behind people who are so unaware of their surroundings, and before you know it 10 minutes pass. No matter how fast you walk you never make it on time.

Let's all agree to walk at an even pace and if you are walking slower, with a large group, or lost, to maybe step aside out of the way and let incoming foot traffic through. If you are in a hallway, maybe don't block off doors or barricade off the entire path, you're going to cause a fire hazard. When your class has finished and there is another class coming in please leave to talk, don't make the incoming class awkwardly stand there glaring at you to leave so they can sit down in their not assigned assigned seats. There is an entire campus for you to have a nice conversation, even outside the classroom is okay so long as you aren't blocking the doorway.

We share a campus, let's make walking a pleasant experience!

Photo Credits: Jeremy Bijoux. A family of geese crossing the street near CIF (Hagey Boulevard). Walk like geese, waddle out of the way!

UW's Student Newspapers

Jeremy Bijoux, 1T Chemical

The University of Waterloo has a rich history of publications, and whether inactive or still active, UW student newspapers/magazines offer entertaining content I recommend to anyone looking for something new to read or to get regular news of campus life. Though they may seem (and/or be) faculty specific, their content is open to students from all faculties, and just requires a little bit of internet searching or walking around campus to get to enjoy!

The Iron Warrior

What better way to start off than with the magazine you're reading right now! I would do a whole "History of The Iron Warrior" article, but that's actually already be done by Bahman Hadji way back in 2010. I highly suggest finding his article on the archives (on the Iron Warrior's website!) to get the full origin story of The Iron Warrior.

To summarize, The Iron Warrior started off as Enginews back in 1959 as EngSoc's newsletter to keep students updated about events on campus. Enginews was then added to The Coryphaeus and later returned as new separate paper in 1967, publishing a mix of (oftentimes questionable) humour and UW news — unfortunately, the humour went a bit too far, leading to the paper's downfall in 1985.

Yet, quickly growing from its shadows, The Iron Warrior began in 1980 as a sister paper, publishing content on UW, professional engineering and current affairs, as well as containing cartoons, opinion pieces, and features on students, professors and design teams. A more professional (and better liked) newspaper, The Iron Warrior gained a wide reader base, and became a popular read for students across all faculties — and even outside UW! (1)

A long run and a pandemic later, The Iron Warrior still runs (though with a smaller team and less readers, courtesy of the pandemic), publishing 3-4 issues a term consisting of articles on student life, engineering, sports, academics, and whatever else we want to write about, as well as puzzles (sudokus and a crossword), a comic, Eng Prof Quotes and The Iron Inquisition, the latter of which is when a student answers to a funny question get featured on the magazine and (restarting this term!) in a reel on our Instagram account (@theironwarrior_uw). Physical copies can be found mainly in Engineering buildings, SLC, DP and DC, and articles are also published on our website (https://iwarrior.uwaterloo.ca/).

Imprint

This is probably the newspaper you'll notice more frequently on campus, and for good reason — this is the official UW student magazine. If you look around campus, their issues are distributed to most buildings (and are also online!); you can still find some of their issues from Spring term!

Imprint has been publishing since 1978, but long before, it started as The Coryphaeus and later on as The Chevron, turning into the newspaper that we notice almost anywhere we go on campus these days. Similar to Iron Warrior, you can find a crossword, as well as more general articles on UW and regional news. Imprint's staff actually consists of both students and non-students, and for those of you interested in joining a newspaper club, Imprint has volunteer and paid contributor roles for students on campus! (2)

mathNEWS

One of my favourite publications, mathNEWS, as the name suggests, are publications made by undergraduate math students, and can be found online or (if you know where to look on MC's 3rd floor, near the MathSoc office) as physical magazines.

mathNEWS came to life at a Winter 1973 meeting where students decided to make a math newspaper organization, leading to one of UW's longest running student papers that, to this day, still that reflects the creativity and voices of UW's math students (3). Within its pages you will find interesting pseudonyms, unique first page, articles, calendars (you don't often see those in magazines), and best of all, many, many, MANY articles/segments on whatever the editors feel like writing about, including shows, MathSoc news, interviews with professors and staff, university courses, Prof Quotes and (of course) math, ranging from 1 sentence lines to 2-3 page articles. Most of us have been told over and over again "quality over quantity", but mathNEWS does quantity AND quality so well that you're sure to get a laugh out of at least 1 article. If you're interested in learning more or joining, find your way into one of their mysterious Production Nights...

Dark Matter

If you could guess it from the name, Dark Matter is SciSoc's online student magazine. Connecting the science faculty, society, and clubs, Dark Matter features SciSoc's news of its clubs' events and showcases of the many things students and professors are up to. The newest issue (at the time of writing) came out September 22nd, so take a look at it! (4)

Journal of Undergraduate Health Research

Founded in 2021 by 2 undergraduate Health Studies students, the University of Waterloo Journal of Undergraduate Health Research is an online publication which features peer-reviewed health research done by undergraduate students, providing incentive and a first step into the world of health research for interested students (5).

Bonus: The Radicle

Sadly, this online magazine's run ended in 2023; but its articles are still pretty interesting. The Radicle, starting as a grassroots initiative by Environment students in Fall 2019, became the digital magazine for Environment students. Named after a radicle (the first part of a seedling to emerge from a plant seed), The Radicle was a platform for entertainment, news, environmental advocacy and more. Their Instagram and website are still active, and there you will find their archives (6).

Extra Bonus: UW Current

What: New student publication, featuring groundbreaking research at UW, global health trends and student perspectives. Who: In collaboration with UW Pre-Medical Society. Why: Inform, inspire and connect the next generation of healthcare leaders. Where/When: Find out by subscribing to their newsletter mailing list from their website https://uwpremed.clubs.wusa.ca/uw-current/, and following the Instagram @uwaterloocurrent! (7)

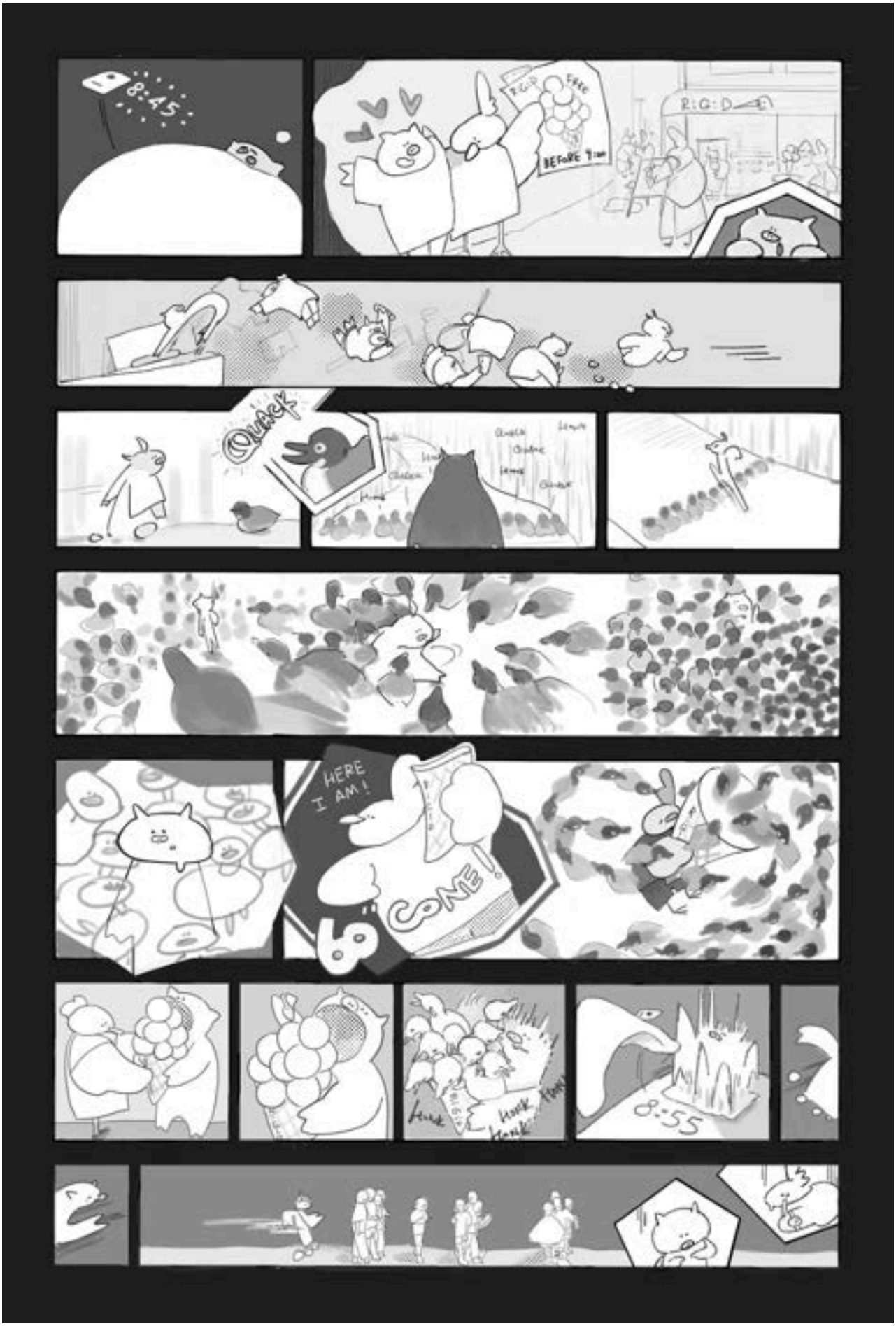
When doing my initial research back in July (when I originally got curious how many student newspapers were on campus), I ended up categorizing the different publications of UW: for students, for alumni, inactive, active, only online, physical and online...I thought I had found every single one, but apparently there's more (that I found out about while writing this article, lol)! If you're really curious, I challenge you to find the others! Hint: Read a certain Imprint article from August...

Have a great reading week, and good luck on midterms! WE GOT THIS, WARRIORS! :)

References:
(1) https://iwarrior.uwaterloo.ca/2010/11/17/5566/our-unique-newspaper-%E2%80%93-since-1980/
(2) https://uwimprint.ca/about-us/
(3) https://mathnews.uwaterloo.ca/wp-content/uploads/2023/01/mathNEWS-151-1.pdf
(4) https://uwaterloo.ca/science-society/dark-matter-0
(5) https://openjournals.uwaterloo.ca/index.php/JUHR/about
(6) https://theradicle.home.blog/
(7) https://uwpremed.clubs.wusa.ca/uw-current/

I Just Want to Get a Free Ice-Cream

Tin Chi Cheung, 1A Geological



Easy Sudoku

1	4				3			
	5			1			9	6
		9	4		6	8		1
			1	2		6	8	
3		8				7		2
	6	7		3	5			
5		4	2		8	9		
6	7			9			2	
			5				6	4

SUDOKU

#2025-18

Hard Sudoku

2	3			9	1			
		4						
	9		6	3				
	5						8	1
	4	9		8		3	5	
7	8						9	
				7	8		1	
						4		
			4	5			7	3

SUDOKU

#2025-19

OWeek Photo Contest Winners!

Photo submitted by: Ashbala Bhatti (CHE '30)

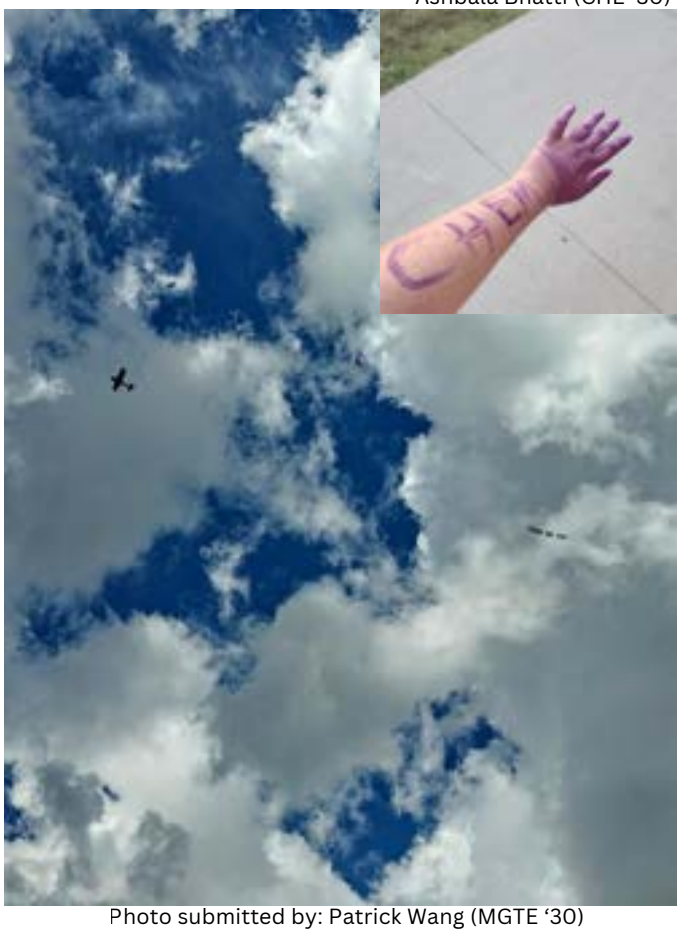


Photo submitted by: Patrick Wang (MGTE '30)

Photo submitted by: Kartik Ram (SYDE '30)

Eng Prof Quotes!

Did your prof say something funny? Share it with us for a chance to have their quote featured in the next issue!

To submit, use this QR code or go on our website https://iwarrior.uwaterloo.ca/

THE IRON INQUISITION

"What's the weirdest thing you've seen happen in a lecture?"

"Bedi's feet in MTE 100, he took his shoes off and showed a class of 100 people his feet"

HENON, TRON 2A

"Our prof was going over design and mouse trap patents. One design involved just a gun shooting the mice (once in MTE 100 and once in MTE 380) through a mouse trap"

AIDAN, TRON 3A

"In 1A someone stole a shoe off this guy's foot and passed it all the way down the back row, it was a huge dirty brown boot, and at the end of lecture someone came with one shoe and was like 'where's my shoe??? Someone stole it' back row shenanigans"

SAASHI, TRON 2A

"Someone was buying furry commissions (buying or selling?) I couldn't tell"

NIKI, TRON 2A

"Materials professor threw a specimen against the wall for a demo and it almost hit the students"

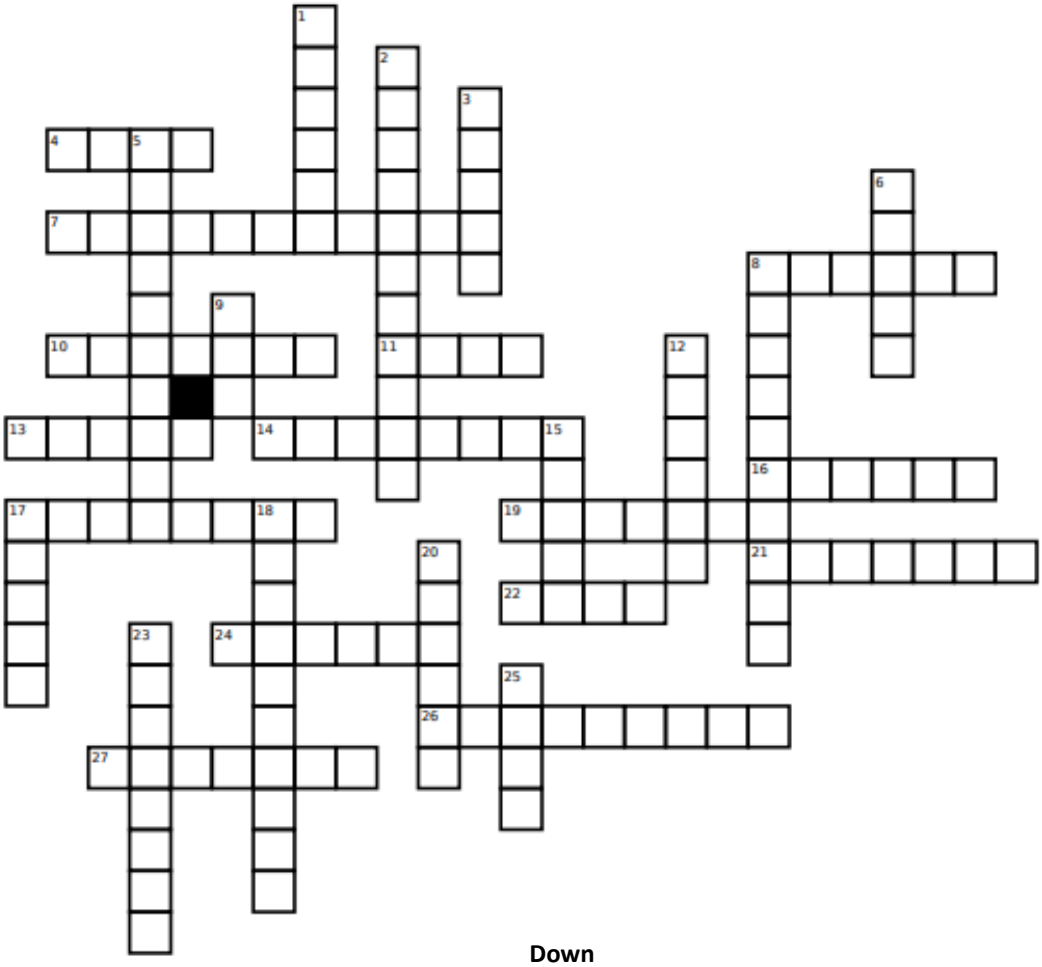
LIAM, TRON 2A

"Right after a calc lecture, some students were horsing around and broke the clock at the back of the class, then went back to lecture as usual"

DAVID AND ATHAVAN, TRON 2A

Check out our instagram for even more Iron Inquisitions @theironwarrior_uw

F25I2 Crossword



Across

4. Defensive trench around castles
7. A group of islands
8. A dome-like structure that sits on the roof of the house. Its name literally translates to “little cup” from Latin
10. Where the river meets the sea
11. The character from Alvin and the Chipmunks with the iconic “ALVINNN” scream
13. The horizontal part of a staircase that you actually step on
14. The chipmunk who made Dave a marshmallow necklace in the movie “Chipwrecked”
16. “All the Single ____” (song by the Chipettes)
17. An artificial channel (there were a lot in Ancient Rome. Think Augustus)
19. The ornamental molding at the top of a wall
21. A bridge across a valley. Usually has a lot of arches
22. A small U-shaped harp from Ancient Greece
24. What Dave gets tickets to in the movie “Chipwrecked”
26. The new trio introduced in “The Squeakquel”
27. Has many definitions including (1) the seat of government for a state/country (2) money (3) the topmost part of a pillar; usually heavily decorated.

Down

1. A shape with four equal sides and four right angles.
2. A polyhedron with 20 faces (it’s the shape of many viruses, if that helps)
3. the reasonable one in the trio
5. The (usually wooden) frame that’s installed around a doorway
6. A narrow but deep body of water surrounded by steep, tall cliffs
8. A beam supported only at one end
9. The one who tries to steal the chipmunks from Dave
12. Art made by arranging coloured stone/glass/ceramic
15. A dark wood typically from Africa, Asia, and the Caribbean
17. Singing chipmunk who wears a red sweatshirt
18. The windows at the very top of a high wall (usually to increase lighting indoor)
20. A painting done on lime plaster (Ancient Greece again)
23. “Want a plane that loops the loop. Me, I want a ____” (Song from Alvin and the Chipmunks)
25. What did Alvin and the chipmunks try to steal in the movie “Road Chip”

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SLEF