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BCIT & BEYOND



October 2018

STUDENT SPOTLIGHT Daniella Molina CRACKING CRYPTOCURRENCY

DRONING THE ANTARCTIC PHOTO FEATURE: Eric J.W. Li CONSCIOUS COMMUTING

+ more



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MAGAZINE

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photo by: eric j.w.li

Crow Me a River

An inky cloud slithers towards you from the horizon line. It pulses and seethes as it makes its way ever closer to campus. The sun begins to dim, shrouded by a mass of blackness descending upon you. You're well into your first semester, you're feeling the stress, and a murder of crows has come home to roost...

It's a familiar sight in the Lower Mainland. As the days get shorter and the nights grow longer, these cacophonous corvids take up their mantle as harbringers of Fall and signal the beginning of a wetter, colder season approaching. By now you're in the swing of things here at BCIT. You've got a good routine going and you finally know where all your lectures and labs are, as you shuffle begrudgingly toward them in the crisp dewy morning. None of us quite know what weather to dress for just yet, but don't get fooled by the Return of the Blob (look it up). Soon the rains will return and the weather will begin to take its toll on us.

So let's make sure we're not leaving any bird behind. When you find the weather, or your courseload, starts getting to you, remember: this too shall pass. When the sun shines, make it count. Have lunch outside, or take a walk beside the water with a friend before class. We're all hanging from the same branch, and the flock is stonger when we squawk together.

So chin up, keep flapping those wings, and don't be afraid to get lost in the mystery of this sinister season. Make the most of it with your fellow crow-horts, because before you know it, we'll all be migrating away to higher treetops and, surprisingly, longing for those dastardly days of yore.

— **LINK magazine**

LINK

MAGAZINE

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LINK is published 8 times annually by students at the British Columbia Institute of Technology (BCIT). We feature exceptional people in our community, big ideas in a changing world, and evolving social dialogue. We welcome writers, photographers and artists of all backgrounds and abilities. Our purpose is to provide a collaborative platform for student expression, and to connect you with one another's stories and experiences. Printed editions are distributed to all 5 BCIT campuses and additional content is published online at:

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Have an idea? Contact us:

editor@linkbcit.ca
604. 451. 7191

Rajita Dang
Associate Editor

Sean Murphy
Publications Intern

Dan Post
Publisher

Lili Motaghedi
Promotions

Contributors

Eric J.W. Li
Dayna Weststeyn
Steven Palfrey
Kareem Gouda
Eda Aktas
Matt Hardwick
Nikita Nayak

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“This is probably the one key strategy that has been the most helpful to my grades.”

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good news.



\$630-million in child care funding

BC Premier John Horgan visited our very own Childcare Centre (SE41) recently to reveal part of a three-year \$1 billion investment into ChildCare BC. The Affordable Child Care Benefit (ACCB) is replacing the current Child Care Subsidy, which qualifies families with a pre-tax income of up to \$111,000 (up from \$55,000). The benefit amount has also been increased from \$750 / month per child up to \$1,250. Over 80,000 families are now eligible for some level of support.

Learn more at www.linkbcit.ca



A new Thai-brary

BCIT's Burnaby Library (SE14) received a special gift this past month with the donation of an all new reading section called the Thailand Corner. The Royal Thai Consulate General himself – Mr. Nontawat Chandrtri - visited the library for the opening which included a tasting session featuring delicious Thai creations made by his own personal chef, a cultural video presentation, and a Q & A. The new books you can check out range from Thai cuisine and architecture, to children's tales and Thai boxing. This might be your best chance to experience that Southeast Asia backpacking trip you've always wanted, but never had time to plan.



Shell Canada won't be drilling off Vancouver Island

Shell Canada recently announced that it was giving up its offshore exploration rights to 50,000 square kilometres along the BC coast. An exploration moratorium has already been in place since 1972 under The Canada Wildlife Act, so many are calling this announcement a nothing burger, but as a symbolic gesture of goodwill for the planet, who can argue against that? It's good news for The Scott Islands marine area which was only just established in June as the first protected marine area in Canada. This is an important place for nesting and breeding for about 40% of the province's bird population and the Islands attract about five to ten million birds annually.



E-SHIP centre opening on campus

Thinking about starting your own business after BCIT? (You can also start one *while* you're here, just look at our Student Spotlight this month.) The SA and BCIT have joined forces and opened a new Entrepreneurial Services Centre to provide resources and feedback to budding CEOs and single proprietors. Students and Alumni can get help with Ideation, Market Research & Statistics, Registration & Licensing, and Funding. With a robust calendar of workshops, speaker panels, networking events, mentorship and 1-to-1 consultation, this is your best place to #BeABoss.

Check your my.bcit email for a chance to name the space.

don't take our word for it.

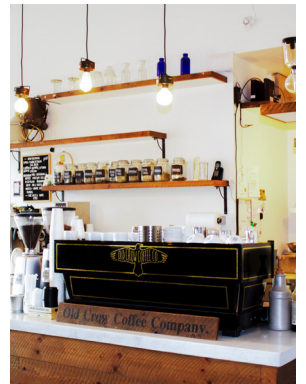
Fall is a great time to post up inside a cozy coffee shop, or hole up in your basement with a new video game or show to binge on. Whether you're in the mood for something serious, or you just want to boogie down in the comfort of your own bean bag chair, we've got you covered.

eat this.

Old Crow Coffee Co.
655 Front St.
New Westminster

Behind the strip of bridal boutiques in New Westminster's downtown core, new cafes, a public garden, and a boxing club have popped up. Among them sits a little gem called Old Crow Coffee Co. — a hipster heaven with locally sourced coffee, artisanal brunch sandwiches, and tattooed baristas. It's the kind of cafe you want to sit in for hours. Every table has power cords, the WiFi signal is strong, the music is mellow, and there are two huge leather sofas in the back for you to curl up on. All around you, 20-somethings lounge and munch on avocado toast, working away on their laptops. Old Crow loves supporting local artists with open mic nights, and monthly standup comedy.

— rajita dang



play this.

Forza: Horizon 4
(playground games)
Windows, Xbox One

Playground Games has done it again with their *Forza Horizon* series. It seamlessly combines Forza Motorsport's fine-tuned driving sim with a sense of pure fun and positive vibes that let you feel how much fun driving can be. This time around, the Horizon festival takes you to the open world of England, Scotland and Wales. The high speed driving experience is bolstered by the addition of seasons which change the way the roads drive, look and feel. Online races with friends and strangers also enhances the world without the drawback of fierce competition that many online games suffer from.

Try this one out, even if racing isn't typically your thing.

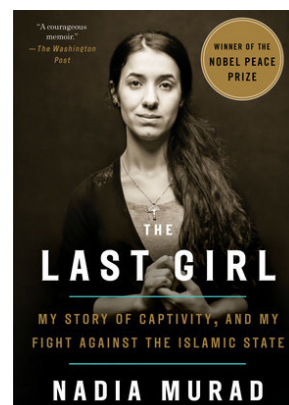
— kareem gouda



read this.

The Last Girl: My Story of Captivity, and My Fight Against the Islamic State
Nadia Murad
(penguin random house)

Nadia Murad just won the Nobel Peace Prize this month so it's a great time to pick up her autobiography *The Last Girl: My Story of Captivity, and My Fight Against the Islamic State*. Murad is from the Sinjar province of Iraq, home to a religious minority group known as the Yazidis. In 2014, her village was captured by ISIS. The men in her village were murdered and the women were taken. Murad and her sisters were sold into sex slavery. It took Murad nearly two years to flee. Since her escape she has become a fierce activist for Yazidi women. Retelling her story over and over, she has spoken at events across the world advocating for the United Nations to prosecute ISIS soldiers for the sexual war crimes they have committed.



— rajita dang

hear this.

Toxic Planet
Cobra Man
(goner records)

Your mom might wonder how you found those old disco records she tried so hard to hide, but no, you can tell mom that you're listening to Cobra Man, an LA-based electronic duo that plays perfectly on our lust for nostalgia with synth beats tighter than mom's bell bottoms. Irony can be tricky to pull off in today's music landscape and, when poorly done, most people will see right through it like a fishbowl platform. But when a modern band nails an homage this perfectly, you just have to stand up in the middle of your study group and shout "Dance Break!" This is shame-free, mirror ball magic with a post-apocalyptic twist.



— dan post

watch this.

Twin Peaks: The Return
David Lynch
(showtime)

Emmy season has come and gone and left the contributions of *Twin Peaks* unacknowledged. This was the original cult show – the first to spawn forums full of fans sifting out Easter Eggs and smashing keyboards over debates of what exactly happened. I'm talking *Star Wars*-level fandom. We had to wait 25 years for Laura Palmer's promise to be fulfilled and get reacquainted with Agent Cooper and the small town of Twin Peaks, but Episode 8 is the best hour of TV you could ever ask for. "Welcome back to the Black Lodge, it was an honour just to be nominated."

This is essential viewing for fans of occult detective fiction.



— sean murphy



student spotlight:

Daniella Molina

BCIT Construction Management // Entrepreneur

words by nikita nayak
photos by dayna weststeyn

Daniella Molina is a student in BCIT's Construction Management program and is originally from Venezuela. She's got 10+ years of experience with her own architectural firm back home and is now launching her own drafting company – Metric Inch Design Studio – this fall in Canada.

As Molina walks into the interview room wearing a crisp blue shirt, she has an air of cool confidence and humility: two solid characteristics of a successful person in the making. She describes juggling a full time courseload and bringing her dream startup company to life. As an international student, she has had to twice face the hurdles of bringing her plans to fruition.

Over the last few months, Molina has carried out some much-focused networking, and has a lot to thank BCITSA Entrepreneurial Services for. She says it was an on-campus poster that started it all. She was scanning the campus soft boards and came across one that boldly asked: 'So You Wanna Be An Entrepreneur?' That very question made her heart leap with excitement. She religiously attended the seminars and was eventually chosen to be a mentee as part of their Mentorship program for entrepreneurs. It opened her eyes to the laws and policies that go hand-in-hand with starting a new business in Canada and helped answer her many burning questions.

The rest was history.

**Tell me about the E-ship program?**

It was still in its initial stages at the BCIT Student Association when I first heard about it. My first contacts were Darshana and Sarah. They were very approachable and welcoming. I had no clue about working in Canada and starting a company from scratch seemed daunting to me. They organized a series of seminars and workshops to educate us about business law and the paperwork involved. They broke it down into simple steps for me. As part of the mentorship program, they would then seek out entrepreneurs with a plausible business idea and connect us with experts who were leading a successful business in a related field themselves.


Who was your mentor?

I was lucky to be matched with Eric Lee, a famous architect in Downtown Vancouver. He jointly owns VictorEric Premium Homes and is a well-known name in the architectural community.

How did you decide on wanting to start your own company?

Initially, I wanted to learn more about the Building Code in Canada, earn relevant experience through my co-op placement at BCIT and move to either Australia or Venezuela.

While studying at BCIT, I maintained an active role in local Venezuelan meet-up groups and got to connect with a lot of people. One of them further introduced me to a client who wanted someone to draft their architectural designs for engineers. I took the opportunity and when my work was finished, I kept getting referrals to other clients... I began working part-time as a freelance draftsman and collaborated often with my BCIT classmates. It was not until I met my current partner, a Canadian, that I began thinking of growing roots in Vancouver. The idea of starting my own company would give me the freedom to work independently and on my own terms.

A person is sitting at a metal table in a park, working on a laptop. The table and benches are made of perforated metal. The ground is covered with fallen leaves. In the background, there are large trees with green and yellowing leaves, and a path. The scene is bathed in warm, golden light, suggesting late afternoon or early morning. A bright sun flare is visible in the upper left corner.

“I had to let go of all my
previous notions and begin
with a clean slate.”



**“Canada cherishes locally owned businesses
and I have always wanted to give back to the
Canadian community.”**

How did you finalize your logo and name?

That is a great story! One of my architect friends in Los Angeles helped me come up with it. Canada has a history of using both Imperial and Metric Systems as units of measurement. We had discussed that it would be cool if the company name reflected this. The moment we decided on Metric Inch, it sounded perfect to me. My friend went on to design a minimalistic logo and I fell in love with it instantly!

What makes your company stand out from the rest?

I've had a vision for making the design process as transparent for the client as possible. A lot of work and time is put into designing and drafting and architectural drawing, and clients tend to feel restless if not updated with progress made. I will officially be launching an exciting platform that will fill this void, the details of which will be released on the company's website in the coming months.

What inspired you to start your company?

Canada cherishes locally owned businesses and I have always wanted to give back to the Canadian community for being so welcoming. The pride Canadians take in local startups has been a driving force in inspiring me to start my own business.

What are the challenges you have faced so far?

Firstly, I did not know where to begin. My mentor and the Entrepreneurship team encouraged me to break it down into simple steps. My previous experience was primarily with working in my native country and adjusting to Canada was challenging. I had to let go of all my previous notions and begin with a clean slate and this was one of the hardest things I have ever done.

As an international student, I am required to acquire a post-graduate work permit in order to apply for full-

time work. Understanding the paperwork was tedious on my part, but the Canadian government is efficient and processes applications without bias, for which I am grateful.

What is your message to prospective entrepreneurs?

I believe that the Canadian education system is very flexible and the instructors are willing to help. All you need to do is ask. I would strongly suggest getting out of your comfort zone and joining networking groups across the city. It really opened avenues for me and I became more aware of Vancouver's cultural diversity. Lastly, I feel that making a plan is great but being open to adapt to new circumstances is even better. ■

Learn more about Daniella's company Metric Inch Design Studio by visiting their website: www.metrinch.ca





Droning in the Ocean

Eric Saczuk is a Geomatics Engineering instructor at BCIT, but he also operates as a UAS pilot and researcher. He's got an eye for photography and operates professionally as Space Hog Graphics with clients ranging from Smirnoff Canada to Vanity Fair. His most recent project, mapping the Antarctic with drones, was funded through grants.

This had all the right buzz words to crank my curiosity to 11, so I sat down with him in his office on campus to talk about that experience.

words by sean murphy
portrait by dayna weststeyn
Antarctic photography by eric saczuk

**Tell me about the Antarctic...**

It was awesome. It's a place of interesting dimensions – I found it to be quite vertical in nature. There's not as much flat ground as you'd expect. The flat angles of the horizons, the icebergs, the mountains; they're all quite varied. The way the light shines on the different elements of the glaciers. It was a really dynamic place. And I found it quite – surprisingly, to me, anyway – full of wildlife. Really abundant.

What was the feeling there for you?

It was way more on the hectic side. I was extremely busy. There weren't many moments where I could chill and relax. In the morning, my mind was always on getting ready for the excursion of the day and getting my gear ready. Then travelling to where we could potentially launch the drones – which could be challenging. We'd land on one beach and there'd be 12,000 penguins there.

[Also] just prepping the gear, and making sure you don't forget anything. You always forget something. Then getting to the place where we could potentially launch. The first place we actually took the Zodiac and landed on the beach was where the 12,000 penguins were. Then you're trying to not disturb the wildlife and find a safe place to launch. Once you know the flying is hectic – you're making sure the drone doesn't fly away or end up in the water. Then packing up and getting back on the ship. Then it's processing time – it's getting the data out of the drone to see what you actually got. It's very stressful because once you're back on the ship,

the ship is moving away. You can't go back. You have no chance of going back to where you just flew. If anything went wrong, you have to adjust and apply that to the next spot. The only time we only really got to socialize was during meal times. At lunch and dinner, that's the only time I got to talk to people.

What equipment did you take with you?

I took two BCIT UAS [Unmanned Aerial Systems]. I had a DJI Maveck Pro – a little one just for filming. I also had the larger DJI Inspire 2. It's more of a heavier-lift drone. You can attach extra sensors on it. We had an X7s Camera on the front of it, and on the back we had three different types of sensors. There was another sensor I was going to take but I didn't have time to implement it.

Was there a sense of urgency?

For me, and for a lot of scientists, the Antarctic is the cutting edge of climate change research. The polar regions are experiencing climate change in a more profound way. A more exasperated way. It's important to collect data in these areas. One question I really wanted to answer was, "What is the feasibility of using drones and these types of sensors to collect data in the Antarctic?" Is it even feasible? Is it worthwhile? Drones don't tend to cover a lot of area. But they're very mobile, they're quick to deploy, and they're very, very cheap to operate, relatively speaking, in comparison to helicopters and other aircrafts. You can get them to places much more efficiently. You can collect data that otherwise wouldn't be easily collected.



Left and above: Who can resist an epic selfie in the Antarctic? (photos by Eric Saczuk)

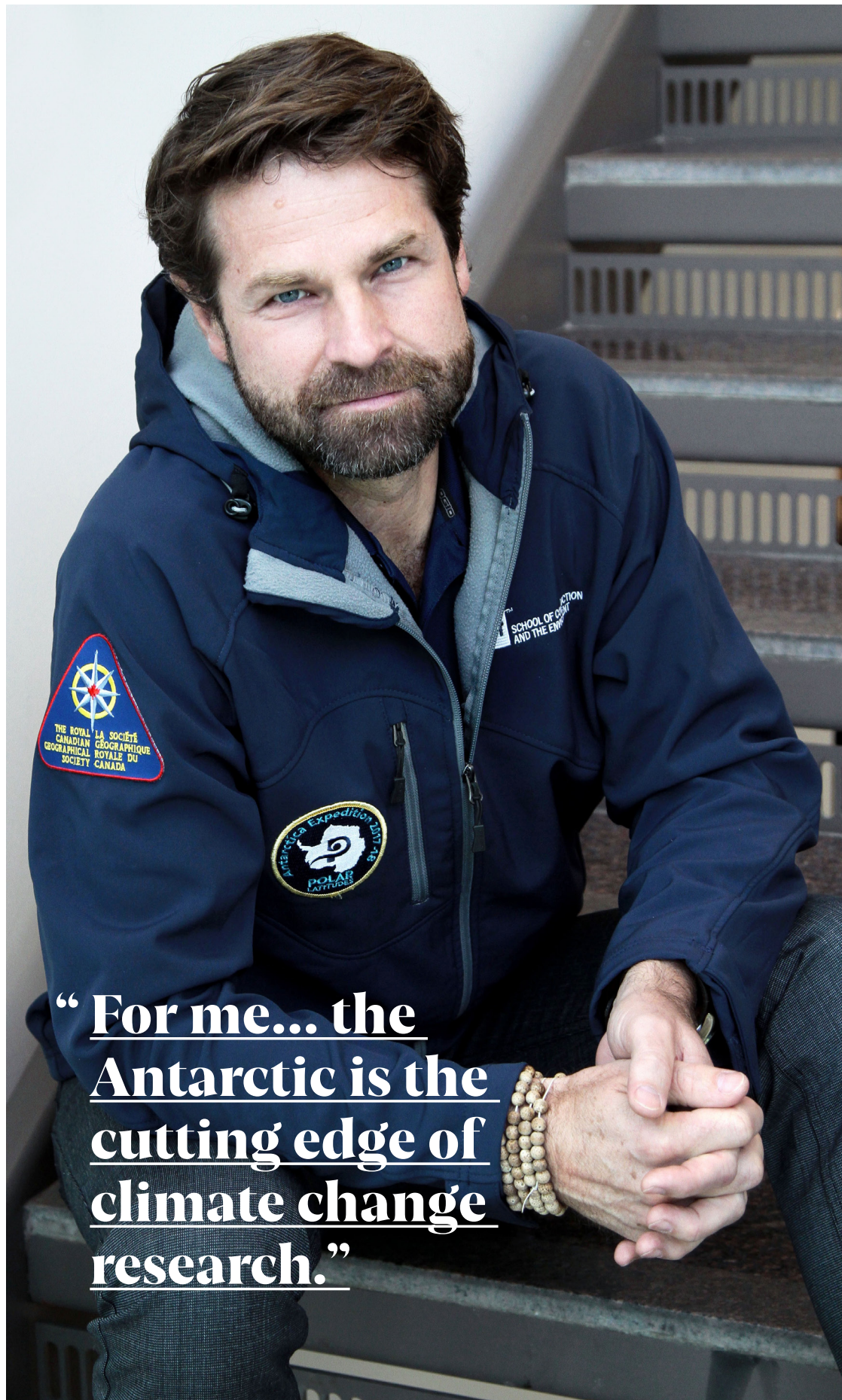
Right: portrait by Dayna Weststeyn

Is there a link between this project and your love of photography?

I've had a number of passions. Aircraft was my first love. That was where I started to dig deep. Ever since I was eight years old. My dad took me to an airshow, and I knew I wanted to do that. I went to the Air Force for a couple of years when I was in grade 10 through 12. Air Force Reserves. Then I went to university and I kind of set that aside because I was focusing on more academic things. I came back to airplanes through geography, aerial photography, satellite images and remote sensing. Drones fit so nicely into that element because they allow me to take pictures and fly. My dad introduced me to photography when I was young, and I really picked it up again about eight years ago when I started to do photography professionally. I do that on the side. It's a great marriage of my two passions.

What was your first camera?

It was a Canon EE1 from 1972 – I had two of those.



“For me... the Antarctic is the cutting edge of climate change research.”

**“I haven’t even really
scratched the surface of
what I can do with the
data that I collected.”**



**What grants did you need for this project to work?**

The Learning and Teacher Framework (LTF) grant was super critical in terms of allowing me to get a berth on the ship. I leveraged three different funds; I applied for the Trek Fund, the International Monetary Fund, and the LTF grant. That's what I needed combined and it just barely covered the costs of getting to Antarctica and back with the gear. The LTC was instrumental in acquiring a lot of the gear I brought with me. That's a fourth element. So without the support of Brian Hosier and Kathy Griffin, this project would not have happened. I'm really grateful they believed in me.

Is this a work in progress, is it something that can be completed?

Research and data collection in the Antarctic – just like anywhere – will never be complete. I hope that this increases the level of data collection and focus on the use of drones in Antarctica. For me, the project report has been written; so I've satisfied all the criteria of the funds and that's all been done. But in terms of the data, there's so much more that can be done. I've haven't even really scratched the surface of what I can do with the data that I collected. Because as soon as I came back, there's a million other things to collect data on. I've just been super busy flying drones and collecting all this data. In a sense, there's a lot more that can be done with that data set.

Is there anything I didn't ask you about you'd like to mention?

Directly related to this, and largely as a result of this project, the idea came up to coordinate and centralize all UAV/UAS activity across all BCIT campuses. What I'm working on right now is a business case to establish the Centre of Excellence at BCIT called the UAS Hub. It'll sit at an institute level and it'll coordinate all UAS activity across all campuses and improve the safety of operating BCIT drones; whether on or off campus. It'll give access to our huge repository of equipment, software and expertise to students, faculty, researchers. They'll be able to come in with interest. We've got manuals, the gear, people you can talk to. People that can take you out and show you how to fly a drone. Transport Canada has given us approval to fly our drones anywhere in Canada – pretty much anytime, anywhere. We want to proceed with that very carefully and very safely, so we maintain our reputation. It's going to elevate BCIT as a Centre of Excellence for UAV training and research.

I don't necessarily want to push drones on everybody, but I do want to make it clear we have them here and I want them to be used. The last thing I want is for us to have invested all this money and energy for them to sit on the shelf and do nothing. But I can say, our department drones here at BCIT don't stay on the shelf very long. They're in the air almost every week. I just flew last week with the FNAM students on Boundary Bay collecting data and I presented some of it this morning. I love the fact that it's active, and I want to make it even more active. If students have the idea to use a drone, I want them to know how to access one. ■

Eric teaches a part-time course, SURV 1125 - Unmanned Aircraft Systems Applications for Geomatics, all about mapping with drones that runs on Saturdays.

Photo Feature

Eric J.W. Li

1st year Technology Teacher Education (TTED)

 www.facebook.com/JW.Portraits

 [@jw.portraits](https://www.instagram.com/jw.portraits)



"I started learning photography in 2013 after retiring from modeling. Being unsatisfied with the quality of photos that were produced in the local industry, I decided to take matters in my own hands to raise the bar. After 2 years of self-teaching photography, I chose to put my focus on portraits. I really enjoy capturing models in grand beautiful scenes with a fantasy and magical feel. Some of my biggest inspirations come from Brooke Shaden, Renee Robyn, and Bella Kotak."

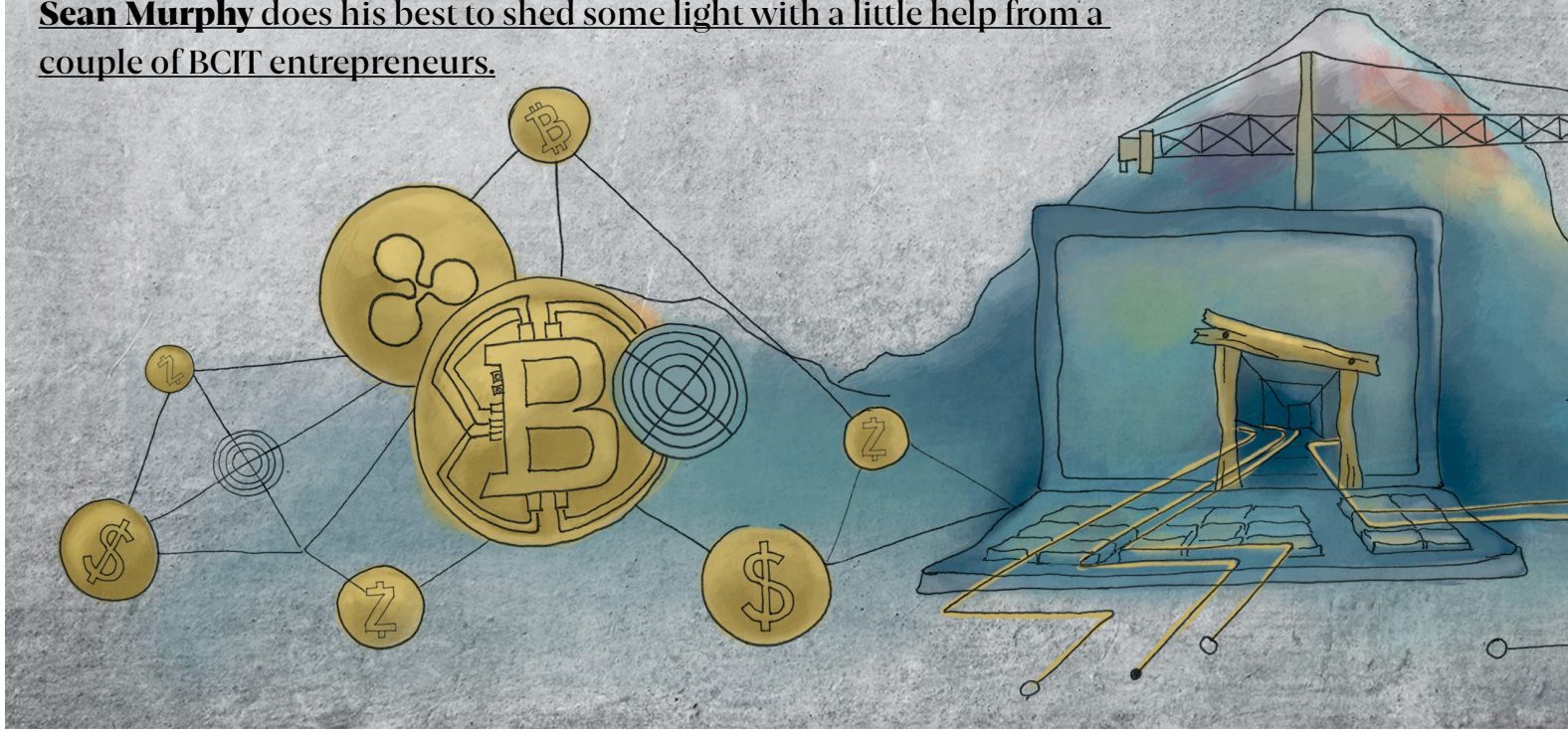






CRACKING CRYPTO

When it comes to understanding digital currencies, it's Bitcoin or bust. Sean Murphy does his best to shed some light with a little help from a couple of BCIT entrepreneurs.



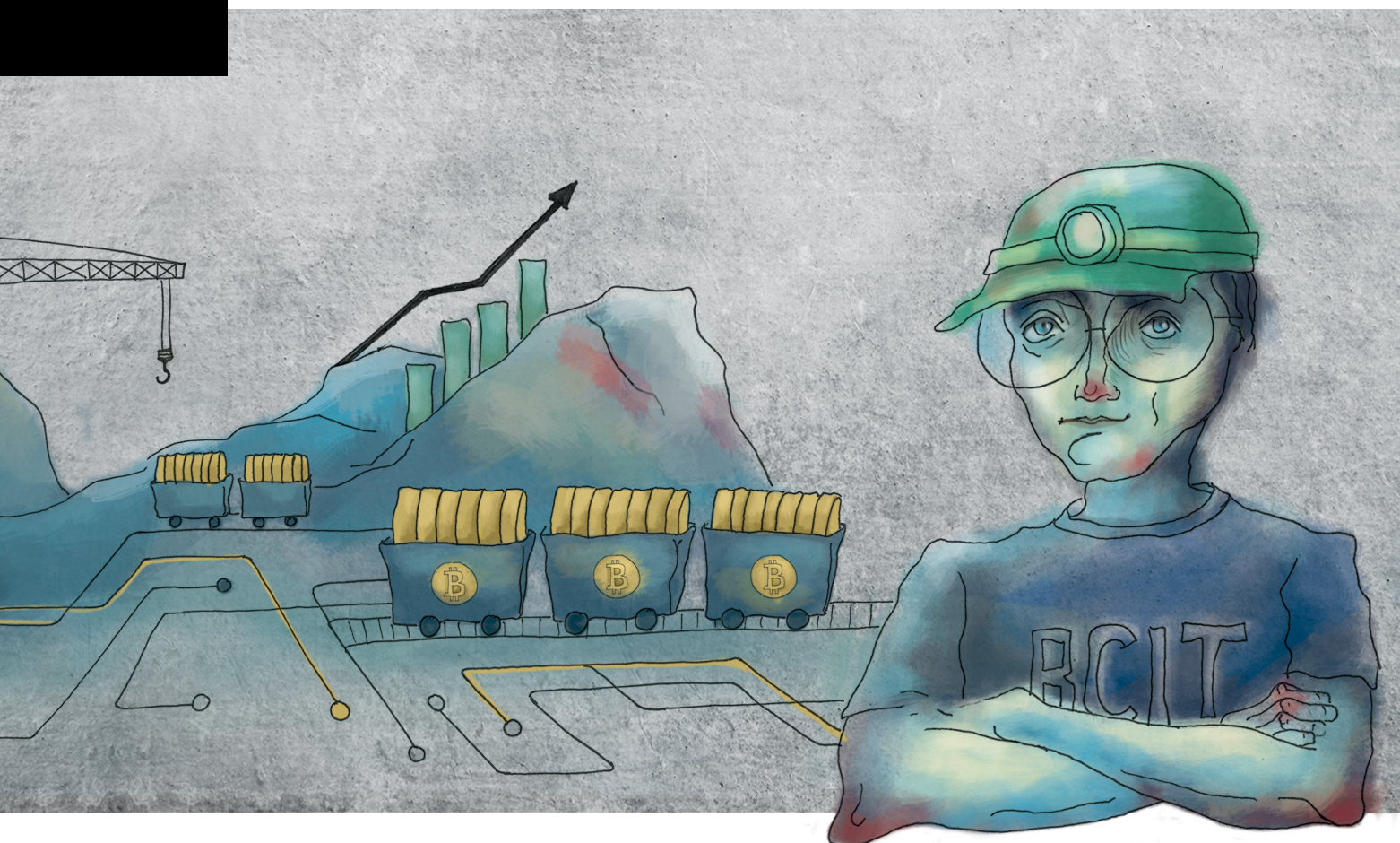
illustrations by Eda Aktas

Cryptocurrency: It's the buzzword synonymous with confusion, frustration, and fear. Cryptocurrency has been slowly building momentum for a few years now, but 2018, which saw Bitcoin's meteoric rise and fall and rise again, was really the year the world became captivated. We can't touch it, so it doesn't really exist but, fancy coloured paper aside, what currency really does exist? Currency is simply the promise of goods and services – and the tender to prove it. So along comes this new form, which has many people claiming is the ultimate solution. One problem remains however: the average person still knows too little about it to adopt it as a truly official system. So what will it take to get us there? I decided to dig deep into the cryptic world of cryptocurrency.

When I first heard of Bitcoin in late 2011, I didn't think much of it. I was outside The Morrissey having a cigarette when a well-dressed man boasted to me about how he had just invested his life savings into Bitcoin. It seemed like a rash decision to me, but who was I to give financial advice, having recently spent \$200 on Magic: the Gathering cards. But the conversation stayed with me. Eventually I discovered similar discussions taking place online, in a forum dedicated to Bitcoin enthusiasts. Devotees were swearing all of their funds to the almighty cryptocurrency – remortgaging houses, taking out lines of credit – all in an online space with a suicide hotline in the sidebar.

Since then, we've seen Bitcoin's value highlighted alongside market updates and prominently featured in its own headlines, often cementing its place or calling its time of death. New cryptocurrencies have flooded the "market" and found their own home in the expanding financial landscape, warping all of our views of what investments mean.

It's important to note that this wave of cryptocurrency hit the market right after 2011's "Occupy Wall Street Movement." This protest against economic inequality had even made its way to



Vancouver where at least 4,000 people and 150 tents were spread around the Vancouver Art Gallery. Cryptocurrency seemed to answer at least some of the questions around decentralizing the banking system that crashed the American economy.

When someone calling themselves “Satoshi Nakamoto” created Bitcoin a decade ago, they pointed to the biggest problem with traditional currency systems that they hoped to fix, which was trust. They’d seen transaction reversals running rampant online, so their guiding question became: How could online purchases become more secure than cash? This led to blockchain technology (more on that later). When it was first conceived, Bitcoin was largely used for purchases on the black market. So before we get into the perks of Bitcoin, it’s good to note that while the banking systems we have in place can be corrupted, they also exist to protect citizens; something that a person taking a completely libertarian stance might not consider. Bitcoin first started trading at \$0.50 US – and it reached its all-time peak in December of 2017 at \$19,666 US. After being banned in China, it plummeted from \$9,052 US to \$6,914 US in February 2018. At the time of writing,

it’s at \$6,442 US. No currency has been this volatile since the yen.

When it comes to cryptocurrency, there are two main words you need to know: ‘blockchain’ and ‘mining.’ Even the most disinterested luddite would have heard these terms by now, since cryptocurrency has been dominating headlines, Twitter, and dinner table conversation throughout this past year. Yet still, even those of us who have dabbled in investments struggle to explain the two concepts that are driving this emerging economy.

Let’s start with blockchain.

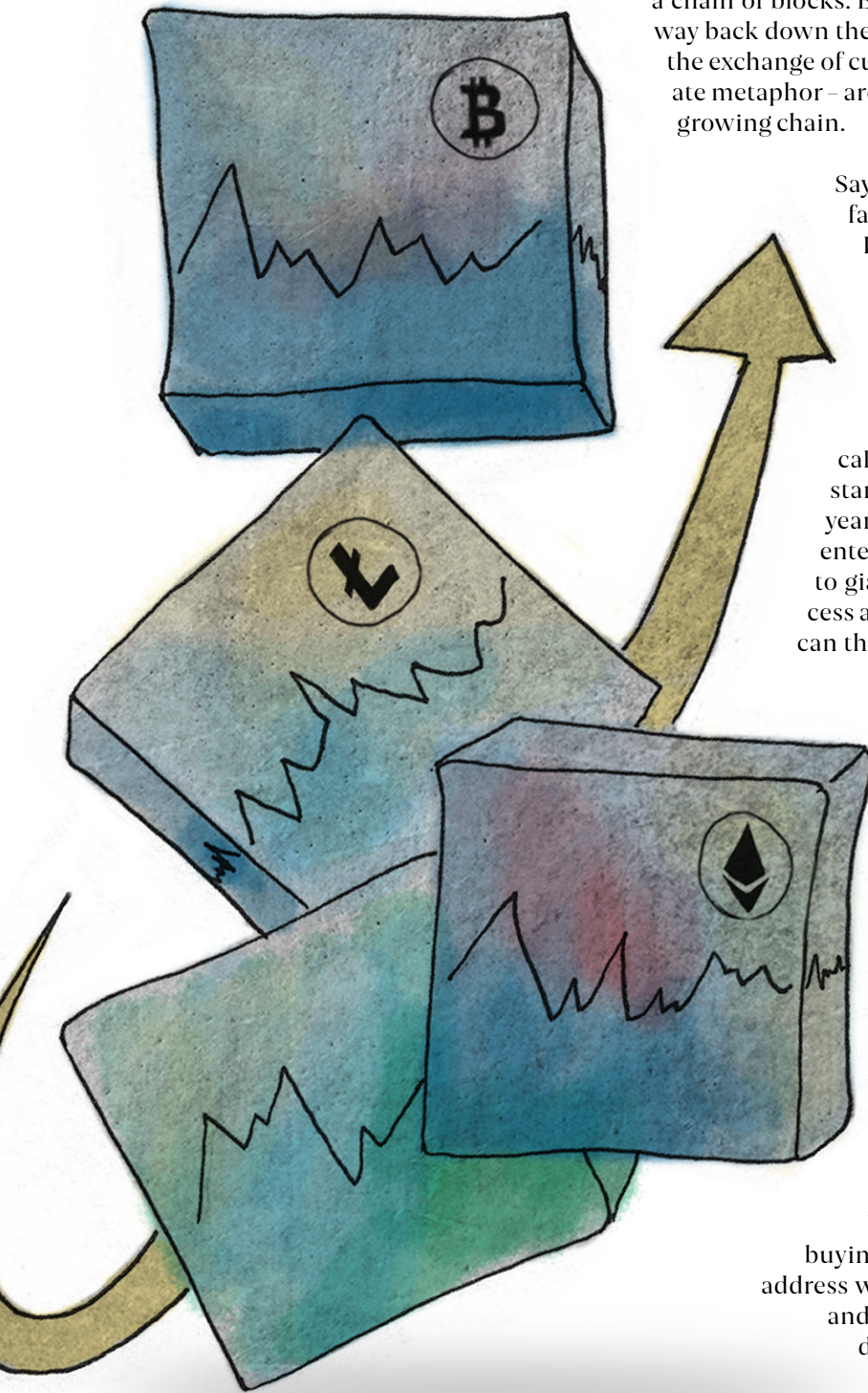
“Their guiding question became: How could online purchases become more secure than cash?”

The blockchain refers to a digital public ledger that keeps a record of all transactions. If you're a visual person, start with the name and imagine a chain of blocks. Each block contains a hash of the previous block, all the way back down the chain to the original block. Every transaction involving the exchange of currency — in this case “coins” was chosen as an appropriate metaphor — are broadcast to the network, where it is encoded into that growing chain.

Say I send you a Bitcoin to pay you back for a coffee (hell, it's fake money and this is theoretical, make it TWO bitcoins. It was a really nice cup of coffee.) When I send it to you, a transaction is logged on the blockchain, and mining computers, either gaming computers with a lot of GPU or ASICs (Application-Specific Integrated Circuits), race to be the first to breakdown a generated complex equation to log the transaction. The first computer to log it receives a portion of Bitcoin as a reward. This is called 'mining.' The number of Bitcoins generated per block starts at 50 and is halved every 210,000 blocks (about four years). Currently, mining blocks reward 12 BTC. This is free enterprise, meaning anyone from basement entrepreneurs to giant corporations are welcome to participate in this process and reap the rewards, though like anything, the more you can throw at the incredible resource-heavy task of mining, the more likely you are to turn a profit. Toronto firm Hut 8 has 56 shipping containers, each filled with 180 computer servers that digitally mine for Bitcoin. Each day, it gets about 50 Bitcoin for its efforts. It currently uses as much electricity as the city of Medicine Hat.

Cryptocurrency is no longer just about Bitcoin though. Today there are several other cryptocurrencies in the mix which are often referred to as 'Altcoins.' Here's a small list you might have heard whispers of amongst your circle: Ethereum, Litecoin, Sandcoin, and who could forget, Dogecoin. The rise of all these different Altcoins is what has really created an interesting investment market with wild swings that could either make you rich or drag you to the crypto-poorhouse.

When you invest in cryptocurrency, you are essentially buying “coins” which are sent to the owners' digital wallet address where the recipient stores theirs with a unique identifier and password. The wallet can be linked to a specific hard drive, or exist in the cloud. From there, you are free to sit on your stash and hope the unit price goes up. Should you get the urge to spend or trade your coins, they are moved from one wallet address to another, across something called the “lightning network,” and the transaction is logged to the blockchain.



It was around here that I decided to ask for help in explaining this whole thing further, so I reached out to BCIT Marketing Alumni Shane Golden. Shane was once the VP of BCIT's now dormant Bitcoin club and today he runs his own cryptocurrency firm Goldenstrike Technologies Inc. Outside his office, we find a bench overlooking False Creek and Granville Island. "I could really only explain about four fifths of it to you," he says. "The reality is, it's a lot to decipher and a lot to try to understand."

Shane begins by telling me how he broke into cryptocurrency using a gaming laptop to start mining Bitcoin in 2011. When a friend's uncle asked him to build him a similar machine, it all snowballed from there. Shane has since helped build Western Canada's largest cryptocurrency mining operation. Now he designs software to mass-control miners: supercomputers continuously solving complex mathematical equations in exchange for cryptocurrency. The higher the value, the longer it usually takes.

He also shared his experience of getting incorporated, and how difficult it was to get a bank account for his business. No bank wants to be involved with cryptocurrencies, in any way, at all. I found this out when none of my credit cards would let me purchase any cryptocurrencies on Coinbase.com.

As cryptocurrencies continue to evolve, moving ever-closer to legitimacy, the potential function of crypto will continue to fluctuate. Shane tells me that even Bitcoin is already the subject of some in-fighting by its own moderators who have since split the currency into Bitcoin and Bitcoin Cash. He says others have branched it out further to create Bitcoin Diamond, and Shane thinks there might even be a Bitcoin Gold now. The arguments came from fundamental disagreements around what Bitcoin should be. Is this a currency to be used for goods and services, free of a banking system that charges us for the privilege of storing our earnings? Is this a long-term investment – like gold or other stocks – to be hoarded and collected, tucked under our digital mattress to sell off when we need a nest egg or mortgage asset?

Curiously, one of the sentiments I continue to hear is around the potential alternate uses of blockchain technol-

ogy. Cryptocurrency is one application for this method of encoding information and assigning value, but blockchain could drastically change how we vote. Imagine a completely un-hackable system where voters could confirm anonymously where their votes went and who received them. We are still a long way off from this, and but the untapped potential for this technology is making it very exciting for fledgling startups.

Here at BCIT, two young entrepreneurs named Grant Smith and Jamie Hoenisch are working on starting their own cryptocurrency mining firm. They're tackling the job of setting up miners – those computers that complete those complex equations and reap the rewards of cryptocurrencies – and they also advise people on what cryptocurren-

cies should be mined. They too share similar stories of how they got into cryptocurrencies. Stories of regret, when Bitcoin first blew up, but then finding their own way into mining instead of investing. With mining, they discovered it was essentially all profit. If cryptocurrencies plummet, the machines themselves will retain their value, and it's simple for them to switch to a different cryptocurrency to mine.

Although the technology behind it is complicated, and still fairly inaccessible to those inexperienced in the ways of

Google, Smith points out that to-date, most of us don't understand how electricity works and yet we can all work a light switch. Cryptocurrency wallets are easy to install as apps downloaded from both Google Play and the iOS App Store. Purchasing cryptocurrency is as easy as any other online purchase, and maybe, as a way to get familiar with the technology, you could swap wallet addresses with that friend who bought you coffee last term.

I'm no a financial advisor. Just ask my Magic: the Gathering cards I sold at a loss. And I personally won't be investing too much into any one cryptocurrency for now, as I still have a lot to learn. But if you are curious, you can easily tap into a community of people passionate about this technology who are in it for the long haul, and want everyone else to come along for the ride. ■

“The rise of all these different Altcoins is what has really created an interesting investment market.”

CONSCIOUS COMMUTING

Trains, chains, and automobiles.

by Matt Hardwick



We've all heard the unnerving predictions of how climate change is going to affect future generations, as well as our own. Although we may never see any drastic changes to our local environment, generations to come may not be so fortunate. Satellites have enabled scientists to see the big picture, collecting information about our planet and its climate on a global scale. This body of data, collected over many years, reveals the signals of a changing climate (NASA, 2018). With increasing amounts of carbon dioxide being pumped into the atmosphere each day, every individual has an opportunity to lower their carbon footprint through environmentally friendly forms of transportation.

Matt Hardwick is the 2018/19 BCITSA Chair for the School of Business, and he's passionate about sustainability. To reach Matt and talk more about some of his forthcoming initiatives, email him at: chairbusiness@bcitsa.ca

RIDESHARING

Over 1 million people will be migrating to the Vancouver metropolitan area during the next 40 years, causing congestion, parking, insurance, and travel times to get progressively worse. Yet for some reason, the number of cars in the Lower Mainland is growing at twice the rate of our population. Thankfully, BC is home to an increasing number of rideshare options at our disposal. In terms of greenhouse gas emissions, shared cars produce 0.32 metric tons of carbon dioxide equivalents a year, which is 10-36 times less than the average driver (Modo, 2014). Plus, using car share services significantly lowers yearly transportation costs. Owning a car costs the average Canadian between \$8,600 and \$13,000 a year, which doesn't even include insurance, fuel, and maintenance (Global News, 2017). In the Lower Mainland, there are four main car sharing companies currently operating: Zipcar, Evo, Car2Go & Modo.

Each company provides a similar service with variations in rates, home parking zones, and methods of booking. At BCIT Burnaby, there are Evo cars waiting for you in the Northwest parking lot, and Modo can be parked for free at any of our campuses.

If paying 14 cents/minute sounds like too much, try carpooling with your friends and classmates. Carpooling is one of the most beneficial forms of transportation available and not only does it share many of the same cost benefits of ridesharing, but carpooling massively lowers the number of cars on the road, ultimately reducing congestion and greenhouse gas emissions. In Canada, 78% of all trips are made with one driver in the car. Sharing a ride with one other person to campus and back would reduce greenhouse gas emissions by 3.72 kilograms (roughly the weight of a 10-pin bowling ball!) If you were to share a ride all year long, together you would reduce greenhouse gas emissions by approximately 893 kilograms (Transport Canada, 2016). Other benefits of carpooling include: the ability to drive in the HOV lane, prolonged life of your personal vehicle, and a chance to build relationships with your classmates. Just avoid spilling coffee on their seat.

PUBLIC TRANSIT

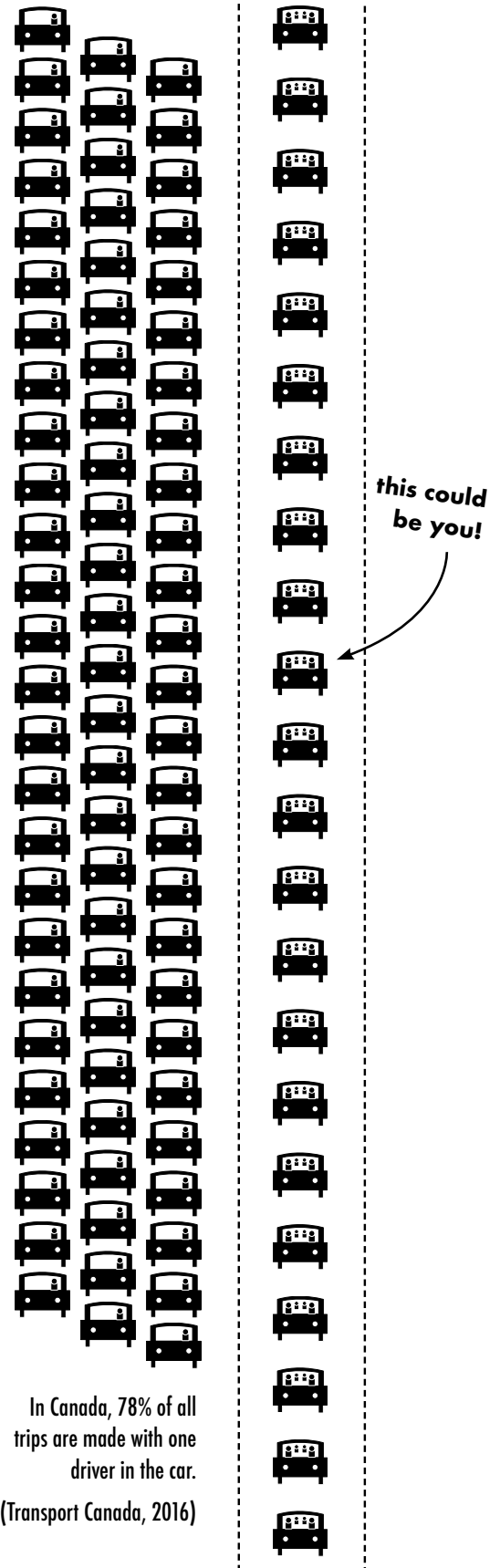
Perhaps the most frowned upon method of eco-transportation is public transit. You don't have to be Elon Musk to see that mass public transit systems are filled with restricted travel times, late buses, and often extremely rude people. Even though public transit is associated with these stigmas, Vancouver's transit system is the third most sustainable in North America (Arcadis, 2017). As students, convenience is a key player in everyday decisions. With the U-Pass, public transit becomes an easy, consistent mode of transportation.

Commutes that generally involve a majority of highway driving will be longer on transit, however commutes with a majority of city driving are equal, if not quicker using transit. By 2050, Translink hopes to be operating solely on renewable energy. This goal aligns with outgoing Mayor Gregor Robertson's hopes of Vancouver becoming the World's Greenest City by 2020. Buses only need to carry 3-8 people to break even with a car on CO2 emissions. Take the darn bus!

FOOT POWER

Lastly, I want to talk about 'active transportation.' Active transportation includes walking, running, and cycling, and enables the concept of connected communities. For instance, people travelling on foot and bike are more likely to engage in a friendly interaction during their trip than people travelling by transit or vehicle (City of Vancouver, 2016). Active transportation is the healthiest form of environmentally friendly transportation and produces zero carbon dioxide emissions. For those that do not believe they are in good enough shape to ride to school, I have news for you: electric bikes (or e-bikes) are becoming more and more affordable. You can now get an entry level e-bike for \$1500. E-bikes are regular bicycles with a battery-powered "pedal assist." When you hop on and push the pedals, a small motor engages and gives you a boost, so you can zip up hills with a loaded backpack. You can expect to get between 55 to 160 kilometers out of your battery before it needs a recharge (Bicycling Mag, 2018). At least 50% of all trips taken are under 10km which is only a 30min ride on an e-bike. With big transportation companies looking into e-bikes, and cities searching for ways to relieve traffic congestion, bike infrastructure will only continue to improve.

As our population grows, and cities expand, the planet will continue to heat up. Carbon dioxide levels will continue to rise and so will ocean water levels. The good news is, every individual can make a difference and slow down this process of deterioration. By leaving the car at home, or choosing a more sustainable mode of transportation, you are reducing your personal carbon footprint and contributing to the climate change initiatives of today's society. The decisions we make today will have a greater effect on the generations to come. Whether you decide to drive halfway to school and hop on a train, or bike to a classmate's house to carpool, I encourage you to use environmentally friendly transportation and help generate awareness of climate change. ■



7 TIPS FOR PERSONAL SUCCESS

BCIT is going to challenge you in ways you never imagined, but follow these tips by student **Steven Palfrey** and take control of your own destiny.

PRACTICE REFLECTION

As somebody who has worked with over 12 counsellors since the age of 14, I've learned that knowing and embracing yourself is one of the keys to being successful in any setting. You're at BCIT to focus on your education and future, so when challenging relationships, family, depression, and anxiety start chipping away at your emotional wellbeing, it's going to be hard to stay focused and motivated. When I first entered post-secondary I was depressed, and I was afraid to be seen as that by my peers. I did not do well because of it and since then I've always made it a priority to meet with counsellors and seek help when needed. Remember: People want to help.

SET HONEST EXPECTATIONS

Are you here to do the best that you can, or to get a diploma/degree as soon as possible? It's critical that you define your own expectations and be honest about them. Talk to people about what it would take to achieve your goals, and start setting up a plan. Be proactive. If you don't understand something, don't be afraid to ask questions.

EMBRACE VULNERABILITY

If there are others who have their own expectations for you, it's key that you share some of your challenges with them. The sooner you can tell your teacher or groupmates that you're struggling with something, the sooner you can begin the conversation around next steps. Teachers are there to help you in your learning process, and that includes giving out tools or advice to students that are struggling. Additionally, your peers will be more prepared and can better manage their expectations around group projects.

IDENTIFY YOUR STRENGTHS & WEAKNESSES

Understanding what you enjoy doing, your aptitude, and your approach, is really critical, especially when developing your interpersonal relationships. If you're analytical (like myself) it's really beneficial to diversify your relationships and meet new people who have excellent communication skills. They're going to help you put your thoughts into words, and they will challenge you to be better.

SHARE YOUR SKILLS

Think of yourself as part of a bigger community. As you build on your strengths – organization, communication, analysis – share them! Learning through teaching is a tremendous studying tool. As you consider how to explain something to people with different aptitudes, you'll be able to view the topic from multiple angles. This is probably the one key strategy that has been the most helpful to my grades. It's also one of the best ways to develop good connections with students who are looking to improve.

GENERATE VALUE THAT EMPOWERS YOU

Learn and embrace how valuable you are! It's important to look back and see what you've achieved and how you've grown. Celebrate success and see yourself as valuable. If you help somebody make a new friend, if you helped somebody get organized, if you helped somebody with their resume - that's value.

NETWORK WITH INTENTION

Connect with other people who have similar goals and/or challenge you. Surround yourself with those who seek personal improvement as well. Join clubs and participate in extracurricular activities. The people you meet at these events are also going to want to grow and be successful.

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A young man with a backpack is looking down at his smartphone. The background is a blurred indoor setting with windows.

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