

UWACTSCI CLUB

NEWSLETTER

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JUNE 2017
EDITION



RECAP OF EVENTS

Excel/VBA Tutorials

Members of FARMSA and ActSci club came out for informative tutorials on Excel and VBA.

Industry Overview

Experienced senior students gave presentations on the major sectors of the insurance industry.

BBQ with Profs

Math students came out to M3 patio to enjoy a barbecue and mingle with ActSci & Stats professors.

RECAP OF EVENTS

Predictive Analytics in P&C

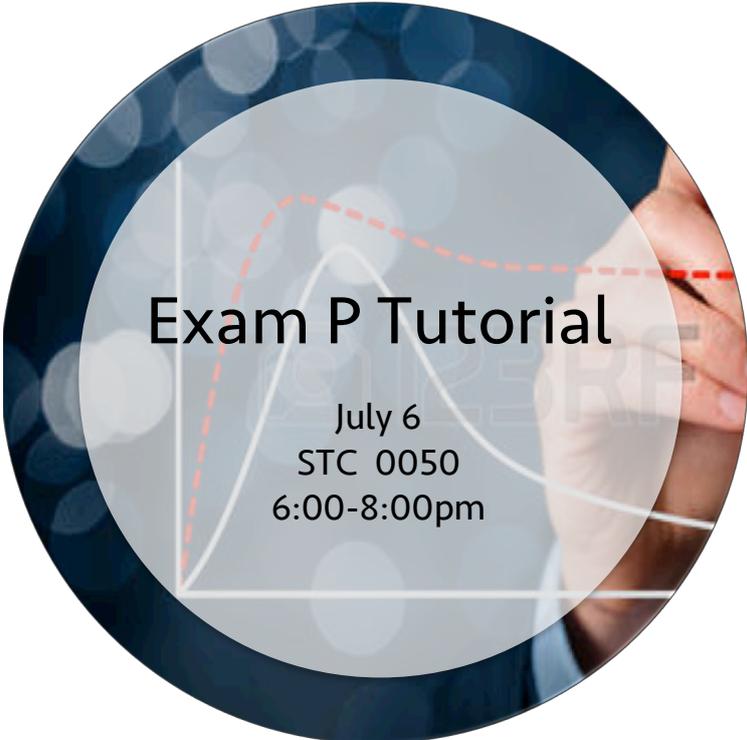
Students came out for a talk by professionals from Economical Insurance about the innovations of predictive analytics in the P&C insurance industry.

Access Tutorial

FARMSA and ActSci Club teamed up once again to host a tutorial for students wanting to gain more experience with Microsoft Access.



UPCOMING EVENTS



Exam P Tutorial

July 6
STC 0050
6:00-8:00pm



Quantify Case Competition

July 15
EV3



Student Panel

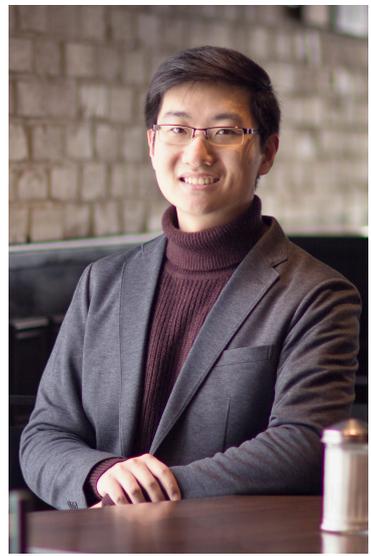
July 12
DC1301 (Fishbowl)
6:00-7:30 pm



End of Term

July 25

INTERVIEW WITH RAYMOND LI



Raymond is a fourth year actuarial science student who is heading to work at Economical Insurance full-time in the fall. Throughout his time at Waterloo, Raymond was heavily involved not only with UW ActSci Club, most recently as its president in Spring 2016, but also pursued leadership roles with Quantify, ASNA, and Math Orientation. In his co-op terms, Raymond pursued his interest in the P&C industry through his terms at Desjardins General Insurance Group, Aon Hewitt, and Economical Insurance.

What are some of your predictions/thoughts on the future of the P&C insurance industry?

Just like in 2012, there is a feeling that a “doomsday” is approaching very soon for the P&C insurance industry. That event would be the day that automated vehicles (self-driving cars) have finally replaced the car as manufactured by Henry Ford. This is based on the fact that the frequency of vehicle accidents would plummet, thus immensely reducing the need for auto insurance. However, I take a different view on this.

First of all, I don’t believe that this will happen “soon”. There are incredible regulatory and ethical hurdles to surmount for this to happen. For example, who is at fault for an accident? Should the driverless vehicle prioritize the safety of the passengers or the pedestrians? What happens if you have the option to turn off the self-driving option and “take the wheel”? These will take many years to determine at the very least.

Second, I do not think this will spell the end of P&C insurance when it will inevitably happen. At its base, the P&C industry insures “stuff”. We are ALWAYS making new stuff. Usually, pretty expensive stuff requires insurance. For example, once commercial satellites were common, people started buying insurance for it. You can insure your smartphone, your drone, or your company against cyber-attacks. These are all risks that have emerged recently, and more will manifest as well.

Finally, because P&C actuaries are constantly molded by change, they readily accept and thrive in it. Change is opportunity in the P&C world, allowing products such as usage-based insurance to surface. Change is thus not the “doomsday” or the end for P&C, it is the beginning of everything.

If you could give some advice to yourself in first year, what would it be?

“Do not approach anything with the mindset that it will fail”

The beginning of university was tough for me. Because of this, it magnified my need to take as little risks as possible. If there was even the slightest possibility of failure, I would think the enterprise doomed from the start. I would not put in as much effort as I would, thus self-prophesizing the undertaking’s failure. For instance, I was extremely hesitant to run for President of the ActSci Club because I was afraid of the “humiliation” I would receive if I wasn’t successful (fortunately, I settled on running 2 hours before the election).

I regret not taking more risks in first year. I should have applied for that volunteering position at ASNA, I should have participated in Toastmasters, tried out more restaurants, talked to more people, made more friends. Taking risks not only leads to opportunities, but also less regrets.

So for any first year out there, I would advise this: try out new things, do your best in everything that you try, and make sure you have some fun along the way. Don’t be afraid of failing. Failure is the greatest teacher, and everyone needs to learn. I know I have learned a lot.

What are some of your highlights from your time at Waterloo?

There’s been a lot of highs during my time at Waterloo. I remember the camaraderie of my first time being an ActSci Club exec in 2014. I’ll always remember receiving a face full of cream as an orientation leader in 2015. I remember the challenges of participating in the SOA Student Case Competition in the beginning of 2016 and my last co-op term on the Advanced Analytics team at Economical in 2017 (which is where I will start full-time in a few months). Mostly though, it’s the people I’ve met along the way. Everyone I’ve met from my first ASNA to participating in Quantify to attending my first live basketball game at the ACC. Those people made my time at Waterloo worthwhile and I wouldn’t be where I am today if I hadn’t met them.

TECHNOLOGY IN INSURANCE

BLOCKCHAIN

Technology is indisputably a principal driver of change in the insurance industry. From telematics to cloud computing to drones; the opportunities for significant revolutions in this veteran industry are endless. Blockchain - the distributed ledger system best known for its use in Bitcoins - is quickly gaining traction in insurance because of its potential to facilitate claims processing and to enable smart contracts.

Put simply, smart contracts are programmable code that self-execute the obligations of both parties in an agreement. Although the concept of smart contracts has existed since the 1990's, they have only been realizable since the development of blockchain technology, which includes the cryptographic security and immutability necessary for the contracts to function effectively.

By removing human involvement, smart contracts could streamline claims processing, making it more economical and efficient, and also reduce error and fraud. For example, a smart contract could establish the moment of passing of a policyholder by scanning online death registries in real time, and then immediately disburse the funds to the selected beneficiary.

SMART CONTRACTS

Autonomy

You're the one making the agreement; there's no need to rely on a broker or lawyer

1



2

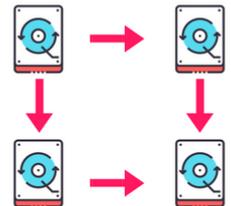
Trust

Your documents are encrypted on a shared ledger

Backup

On the blockchain, your documents are duplicated many times over

3



4

Savings

Smart contracts save you money since they knock out the presence of an intermediary

Accuracy

Smart contracts are not only faster and cheaper but also avoid the errors that come from manually filling out heaps of forms.

5



Recently, AIG, Standard Chartered and IBM partnered together to create the first multinational, smart contract-based insurance policy using blockchain. The companies converted a multinational master policy in the UK and three local policies in Singapore, Kenya, and the US into one smart contract. This allows visibility and transparency into coverage and premium payments, and also allows third parties, such as brokers and auditors, a customized view into policy and payment data. The pilot project was conducted in order to better understand the potential of blockchain to facilitate multinational risk transfer by increasing transparency and trust.

By mitigating risk and fraud, blockchain technology could yield significant savings for insurance companies. According to a recent report by the Institute of International Finance, in the United States and Europe alone, fraud costs insurers an estimate \$60 billion in

annual losses. Moreover, by registering data and records on distributed ledgers, verification processes could be hugely simplified.

For instance, blockchain could significantly ameliorate the title insurance market. Individuals who purchase or refinance their homes face very high transaction costs and a costly title search process. If real estate records were recorded on blockchain's distributed ledger in real-time, then insurers would have easy access to information that would allow them to clear a title. In a recent report by Goldman-Sachs, it predicted that blockchain technology could yield savings of \$2 to \$ 4 billion in the U.S. title insurance market alone.

Although blockchain is still a nascent technology, there are already many insurance and start-up firms exploring its potential, and this trend is expected to continue.

BLOCKCHAIN IN THE INSURANCE INDUSTRY



Event-triggered smart contracts

- Automatic claims
- Self-executing contracts
- Reduced fraud, improved customer experience



Increased back-end efficiency

- Decentralized, fully digital, safe markets
- Less human error, no data duplication
- Fewer processing delays, transaction costs



Disintermediation

- Decentralized carrier consortium
- Automatic identity validation
- Self-executed transactions



Better pricing and risk assessment

- Realtime, individualized
- Automatic data sharing for analytics and pricing
- Connected to the IoT, big data, health trackers



New types of insurance

- P2P, shared economy, spotinsurance, hybrids
- More transparency, less cost
- Social media and crowdsourced oracles



Reaching the underserved

- Solves many microinsurance challenges
- Automatic construction of distributed database
- Better prices through simplicity and efficiency