Ryan KWOK

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🖳 kwokyto.github.io/resume/

PERSONAL STATEMENT

About Me

My passion in cybersecurity sparked from watching the television series *Mr. Robot*, which followed a cybersecurity engineer who was also a vigilante hacker by night. I was fascinated by *Mr. Robot*'s technical (and psychological) accuracy in every hacking scene, down to the social engineering techniques and the tools used. This gave me a deeper appreciation for cybersecurity and jumpstarted my journey in the cybersecurity world. As a diligent and self-motivated learner, my passion in cybersecurity had not only led me to pick up coding skills, but also to attend several technical courses to build my skills in cybersecurity, all before officially pursuing my honours degree.

Outside of my studies, I love to spend my time out at sea. In fact, I started sailing when I was 8, and fell in love with the sport ever since. I believe that my sailing hobby reflects my adventurous and "willing-to-try-new-things" attitude. Even though I have retired from competitive sailing for over 6 years now, I am still pushing myself to explore new variants of sailing. In fact, I am currently training to be proficient in kitesurfing and windsurfing, both being thrill-seeking sports. This attitude also shows in the work that I do, where I tend to try unconventional means in presentation, products, or method, so as to stand out from the rest.

Internship Objectives

Being a student in technology, I must admit that I lack the business awareness that is essential to kickstart any wild ideas that I have. Just last semester, I had plans to set up a small lunch café in my residential college that fell through when I could not figure out how to manage costs. Hence, I would like to understand all the financial know-how and risk management skills to convert an idea into a future start-up.

I also aim to gain some leadership skills, especially when trying to prioritise team welfare without falling short on practical objectives. I believe that working in a start-up can teach me to become a more effective leader that people are willing to respect and follow.

Ultimately, with the cybersecurity industry in its relative infancy in Singapore, I wish to use these non-technical skills to understand the practical decisions that companies have to make when dealing with cybersecurity. Such insights are necessary to inform any potential solutions and policies that can be implemented to build a truly resilient Singapore.

Strengths and Weaknesses

I was recruited into the Singapore's Optimist National Sailing Team at an early age of 11 till 15. Rigorous and strict trainings to perform at international standards taught me discipline, independence, and perseverance - life lessons that I hold close to myself carry with myself until today. I always strive to produce the best work in everything that I do and will never quit until I reach that standard for myself.

However, I have to admit that this overzealous attitude has often blinded me to my own capacities. In my previous internship, I was unable to effectively maintain a healthy work-life balance, which resulted in me burning out early in the internship. Fortunately, I learnt how to proactively section out my time, and deliberately allocating time to self-care activities such as my sailing hobbies, binging a TV series, or even just sleeping. Nevertheless, this is an active work in progress, and being more aware has reminded me to prioritise my mental health.

Unique Skill Sets

On top of my degree, I am also undertaking the University Scholars Programme, which is a multidisciplinary academic programme that allows me to make cross-discipline connections beyond computing. I often pride myself in being able to see things from different perspectives and give a holistic response that considers all points of view. With that, I am able to appreciate the different threads in life that may seem irrelevant but play a significant role in technology. Such topics that I have explored include philosophy, psychology, data presentation, self-help techniques, and religion.

ACADEMIC QUALIFICATIONS

Aug 2020 -
Jul 2024
National University of Singapore
- Bachelor of Computing (Honours) in Information Security ([Commendation Letter](#) | [Dean's List](#))
- University Scholars Programme ([Honour Roll](#))
- Minor in Philosophy
- Course details in Appendix A

Aug 2019
Smart Nation Scholarship
- Awarded the Smart Nation Scholarship that develops and nurtures technology talents within public service into next-generation leaders who will spearhead Singapore's digital transformation
- 4 year bond with Cyber Security Agency of Singapore
- Feature Articles: [Scholarship Guide](#) | [BrightSparks](#) | [ZaoBao](#)

Jan 2016 -
Dec 2017
Raffles Junior College
- Singapore-Cambridge General Certificate of Education Advanced Level
- Subjects Mathematics (A), Chemistry (A), Physics (A), Chinese (A), Project Work (A), and Knowledge and Inquiry (B).

WORK EXPERIENCE

May 2022 -
Jul 2022
Cyber Security Developer, Amaris.AI Private Limited (Singapore)
- Streamlined and refined the interface of systems dealing with adversarial AI for customers
- Evaluated and demonstrated deepfake generation technologies to EXCO
- Integrated deepfake detection components to upgrade deepfake detection systems
- Spearheaded the investigation, assessment, and testing of audio transcription and verification technologies as part of the upgrading of the Hospitality System.
- Reviewed and standardised technical documentation of all systems assigned

May 2021 -
Jul 2021
Intern, Strategy, Cyber Security Agency of Singapore
- Advised superiors on current international and local regulations in cybersecurity of AI, cloud, and telecommunications
- Forecasted possible regulations on the cybersecurity of future technologies such as human augmentation, space technology, and quantum computing
- Qualified regulatory direction recommendations for Singapore by proposing specific actions and cybersecurity policies in each cybersecurity field

Jan 2021 -
Nov 2022
Teaching Assistant, National University of Singapore
- CS1010X Programming Methodology (Jan - Jul 2021 and Jan - Apr 2022)
- CS2113 Software Engineering & Object-Oriented Programming (Aug - Nov 2021)
- IS1108 Digital Ethics and Data Privacy (Aug - Nov 2022)

Feb 2020 -
July 2020
Intern, Cyber Security Programme Centre, Cyber Security Agency of Singapore
- Yielded security insights through penetration tests and vulnerability assessments
- Identified and tested tools for mobile application penetration testing
- Accelerated onboarding processes via Python automation
- Advised superiors on recommendations based on evaluations and analyses of cybersecurity solutions. Fields of interest include Cloud Security, Zero Trust Security in the Cloud, Cloud Key Management Services, and Threats in Facial Recognition Software

Apr 2019 -
Present
National Race Officer, Singapore Sailing Federation
- Lead the sailing race management team during competitions on an ad-hoc basis
- Professionally conduct races for huge fleets with more than 100 sailors

Feb 2018 -	**Diver, Naval Diving Unit, Republic of Singapore Navy**
Dec 2019	- Served in the Clearance Diving Group as part of Singapore's mandatory conscription
	- Overcame physically and mentally demanding military and diving training
	- Specialised in clearance of underwater explosives

Apr 2016 -	**Sailing Coach, Singapore Sailing Federation**
Feb 2018	- Mentored and trained beginner Optimist sailors of ages 6 to 12
	- Cultivated a fun environment for young aspiring sailors to learn the sport of sailing
	- Supervised sailors' safety while fostering their interest and passion for the sport

TECHNICAL SKILLS

Certifications
- CompTIA Security+   Certificate | Verification
- EC Council Certified Ethical Hacker   Certificate
- EC Council Computer Hacking and Forensics Investigator   Certificate
- Google Cloud Associate Cloud Engineer   Certificate | Verification

Courses Taken
- Certified Blockchain Specialist   Certificate
- Certified Internet of Things Specialist   Certificate
- Certified Machine Learning Specialist   Certificate
- Deep Learning with TensorFlow and Python   Certificate
- React Native 101   Certificate

Literacy and Experience
- Proficient in Python, C, C++, and Java
- Development Experience in React Framework, Docker, Virtual Machines, and RaspberryPi
- Proficient in Microsoft Word, PowerPoint, and Excel

PERSONAL PROJECTS

Chilling Sessions   **NUS Residential Life Article**
- Orchestrated and directed a ground-up initiative focused on reminding University Scholars Programme students to relax and focus on mental health
- Coordinated 5 collaborations with student-led groups to conduct activities to improve mental health
- Awarded a special $1000 welfare fund by NUS Office of Student Affairs and was showcased in their article

A Safe Space   **FAQ | Telegram Bot**
- Founded and launched a Telegram bot that simulates an anonymous group chat
- Envisioned to be a platform for University Scholars Programme students to hold anonymous conversations on mental health issues

University Scholars Programme (USP) Queue Bot   **Documentation | Telegram Bot**
- Initiated and engineered a queue system for USP events on Telegram
- Consolidated platform for users that expedites and simplifies admin control of late and missing users
- Maximised user friendliness with automatic notifications for users nearing the end of the queue

Build On, Singapore 2020 Hackathon   **Certificate | Product Pitch**
- Achieved a semi-finalist position in this hackathon implementing Amazon Web Services solutions
- Designed and developed a "Reliability Bot" Telegram bot that determines how reliable a piece of text is, and returns a recommendation with an educational factor
- Oversaw the implementation of AWS Comprehend for language processing and sentiment analysis

Degree: Bachelor of Computing (Honours) in Information Security
Cumulative Average Point: **4.71 / 5.00**

Year	Level	Course Description	Grade
Jan - Jul 2020	Pre-Matriculation	Programming Methodology	A+
Aug - Nov 2020	Year 1 / Semester 1	Discrete Structures	A+
		Data Structures and Algorithms	A
		Ethics in Computing	A-
		Linear Algebra I	A
		University Scholars Seminar *	IP
		Writing & Critical Thinking: Religion in Public Life *	B+
		Quantitative Reasoning ^	A
Jan - Apr 2021	Year 1 / Semester 2	Software Engineering & Object-Oriented Programming	A+
		Calculus for Computing	A-
		Quantitative Reasoning Foundation: Quantifying Environmental Quality *	A-
		Developing Meaningful Indicators *	A
		Thoughtful Learning with Machines *	A-
		University Scholars Seminar *	S
		Spanish 1 ^	A-
Aug - Nov 2021	Year 2 / Semester 1	Computer Organisation	A
		Database Systems	A
		Introduction to Computer Networks	B+
		Introduction to Information Security	B+
		Introduction to Artificial Intelligence	B+
		Life, the Universe, and Everything +	A
Jan - Apr 2022	Year 2 / Semester 2	Introduction to Operating Systems	A-
		Legal Aspects of Information Security	A
		Probability and Statistics	A
		Effective Decision Making *	A
		Epistemology +	A
May - Jul 2022	Year 2 / Summer	Internship	CS
Aug - Nov 2022	Year 3 / Semester 1	Computer Security	IP
		Cryptography Theory and Practice	IP
		Information Systems Leadership and Communication	IP
		Technologies of the Self: From Socrates to Self-Help *	IP
		Philosophy of Religion +	IP

* Module taken to fulfil University Scholars Programme (USP) requirements
^ Module taken to fulfil University Requirements or as an Unrestricted Elective
+ Module taken to fulfil Minor in Philosophy requirements

NUS Grading Scale:
A+ & A (5.0); A- (4.5); B+ (4.0); B (3.5); B- (3.0); C+ (2.5); C (2.0); D+ (1.5); D (1.0); F (0)
S = Satisfactory; U = Unsatisfactory
CS = Completed Satisfactorily; CU = Completed Unsatisfactorily; IP = In Progress