# **STUDENT PERSONAL STATEMENT**

Upload a 900 word statement explaining why you should win the Student of the Year Award based on how you performed above and beyond your employer's expectations and your job description. Format your statement so that each of the judging criteria (see above) is addressed under its own heading. Be sure to translate technical information into language that anyone can understand, as people without knowledge of your background may be reviewing the statement. They should be able to appreciate the meaning and significance of your accomplishments in order to make a fair assessment.

Personal statement (1 - 2 pages, single spaced, maximum length of 900 words)

* Explain why you should win the Student of the Year Award (include how you performed above and beyond your employer's expectations and your job description)
* Format the statement so that each of the judging criteria (see below) is addressed under its own heading
* Translate technical information into language that anyone can understand. People without knowledge of your background may be reviewing the statement. They should be able to appreciate the meaning and significance of your accomplishments in order to make a fair assessment.

My name is Hieu (Hugh) Nguyen. I a fourth year Mathematics/Statistics & Computer Science student. This statement will highlight my outstanding performance, contributions and achievements over the past two co-op terms at Royal Bank of Canada (RBC) within the Joint Securities Operations Center (JSOC) as a Data Scientist Co-op.

* Outstanding Evaluation: Evaluations received from your employer should ideally be *outstanding*for at least one work term in the award year and preferably at least *excellent*in other work terms of the award year (15 pts.)

My recent completion of the Fall 2018 work term marked the 5th consecutive outstanding co-op term overall. The outstanding evaluations in the past two terms were earned through my work and scientific research in tackling the two use cases in cybersecurity and financial crime detection at RBC

* Contribution to employer, especially above and beyond the job description (15 pts.)

At RBC – JSOC, my role involved working closely with other data scientists, cybersecurity and financial fraud experts to develop machine learning algorithms, artificial intelligence techniques in order to detect complex cybersecurity-related threats and financial crime scenarios. As a Data Scientist co-op, instead of settling with the initial support role, I took initiatives to asked Jamie Gamble, Director of Threat Hunting and Sahar Rahmani, Director of JSOC to become the project owner for two official use cases and brought them both to closure with high quality standards by the time by work terms ended. Both use cases required fast learning capability, teamwork, independent and analytical thinking, problem solving, and heavy scientific research in various cutting edge technologies, machine learning and deep learning methodologies in cybersecurity and financial crime

In the past two co-op terms, Hugh has been a valuable asset to our team and RBC. He has been able to show outstanding work in meeting his deliverables and engaging with the community within RBC. His contributions to Cyber Analytics and Joint Security Operations Center initiatives, e.g., Advanced Threat Analytics, Financial Crime Detection, Data Science talks, etc., have helped our team to deliver on commitments despite numerous challenges that we face on a daily basis. Given that our line of work deals with cutting edge cybersecurity and financial fraud problems and most of our deliverables are new capabilities which require scientific research, keeping delivery timelines under control while preserving quality is very challenging. In addition, complexities of the bank environment and the need to work with various teams and technologies inject a lot of moving parts into the equation. In such a complex setting, sustainable progress and excellent performance may only be achieved through:

* Having a thorough and methodical scientific approaches to effectively tackle a diverse set of complex problems
* Applying analytical and independent thinking, good problem solving to the approach
* Continuous research and quick self-learning to adapt with new cutting edge technologies, state-of-the-art techniques in Machine Learning & Artificial Intelligence
* Being well organized, persistent, and taking activities to closure
* Working effectively both independently and as part of a big team

Developed analytics solutions to deliver advanced threat and financial fraud analytics capabilities

Learned and deployed novel Machine Learning & Artificial Intelligence methods (Recurrent Neural Networks with Long-Short Term Memory, Isolation Trees, Spectral Graph Theory, Graph Convolution Networks, etc.) to support threat hunting and financial fraud scenarios

Developed high performance computing and big data analytics skills to enable the development of advanced threat and financial crime analytics use cases

Participated in data science Lunch and Learn talks and also presented two deep learning talks on the design and usage of Recurrent Neural Networks and Graph Convolution Networks

His top performance award on the Fall Hackathon was outstanding, which led to the lunch meeting top executives within RBC, including the Chief Technology Officer of RBC

His extensive involvement in volunteer activities on behalf of RBC under the leadership of Alexa Crerar, RBC Amplify Manager was commendable

* Academic achievements (minimum 75 per cent overall average) (10 pts.)
* Contribution to co-op (5 pts.)

This refers to what you've done to promote co-operative education. In the past students have mentioned helping other co-op students to improve their résumés, giving a presentation on co-op education to their company's management while on a work term, volunteering to talk to potential students about co-op at Waterloo open houses, sitting on the Co-op Student Council or if in Engineering on EngSoc, returning to their high school to talk to classes about co-op and Waterloo, etc.

* Volunteer and or community involvement (5 pts.)