

A s(t)imulating summer!



If you never try, you'll never know what you are capable of. This is how I addressed what many students at my university called an “almost impossible” task: finding a summer job in the aerospace industry as a freshman. After learning about the importance of networking, initiative, and preparation (aspects at the heart of Schulich Leaders values) and a good interview, here I am, working as a test engineer at CAE for the summer.

CAE is a world leader in simulation and modeling technologies and provides training services to airlines, aircraft manufacturers, healthcare specialists, and defense customers. My work is on the twin-engine Airbus H135 helicopter simulator as part of the verification and validation team, or “V&V”. After CAE signs a contract with a customer and the requirements are written for the simulator, the hardware is built, developers code each aircraft’s system and integrate it into the simulator. It’s only at the final stage that our team takes control over the simulator.

In our daily job, we run acceptance test procedures (ATP) to objectively test each system’s functionality. Each ATP is designed to test a particular system in the aircraft. In short, we set up the aircraft in a particular configuration and examine the effects. This requires that we not only need to have a deep understanding of each aircraft’s system (engine, avionics, flight controls, autopilot, etc.) but we also need to know how the simulation (software) is behaving in the background. I had to rapidly adapt and learn new systems and I’m still learning! If the simulator is not performing as per aircraft documentation, we raise a red flag, or what we call a snag.

Test engineers interact with a lot of specialists: other test engineers (systems specialists), test pilots (mission and flight specialists), project engineers, project managers, assignees, and integration specialists. When a specific problem or snag arises, I know specifically who in our team

is the most capable person for resolving the issue. For my part, I've developed an expertise in some of this aircraft's systems as I have worked on them more than anyone else in the team. We work efficiently together to avoid duplication and resolve snags rapidly. Communication is key.

Client interaction is another very important part of the job. As test engineers, we are at the interface between CAE and the customer during testing. When dealing with the customer, we sometimes need to discuss issues and convince them that they can be resolved, come to agreements, and "translate" their requests into engineering terms. These soft skills are not specifically taught in the undergraduate curriculum although they are vital in this industry. This is the best place to practice them.

So far, this first experience in the aerospace industry has been very stimulating. I am not treated as an intern at CAE, but rather like a full-fledged test engineer and part of a team of very talented people. I even had the opportunity to work abroad in the UK for two weeks on a military base where the simulators are deployed and have three more weeks scheduled for August! It is a summer full of discoveries and opportunities.