

COMPUTER SCIENCE CO-OP: REFLECTION #1

CSCI 8893 Work Term Course

COMMUNICATION

The Core Employability Skill and Graduate Attribute of **Communication** is to:

Communicate complex computing reasoning, processes, instructions, and solutions effectively to others, including those in the computing community and society at large, through oral, written, and/or electronic communication.

Specifically, when focussing on communication skills, how will you incorporate **Self-Management Skills**, such as time management and priority management?

- Manage resources effectively by analyzing workload, assigning priorities, and maintaining focus on productive endeavours.
- Determine priorities by considering such factors as when each task needs to be completed, expected timeline, relative importance, and potential impact on others.

My Communication Goal in my final work term is to *(in approx. 50 words):*

My goal is to communicate effectively with military personnel, programmers, and professionals from other disciplines at Canadian Forces Base (CFB) Halifax. I aim to adapt my communication style to ensure clarity, whether explaining technical concepts like network automation, collaborating with developers, or discussing solutions across fields, using reports, meetings, and technical documentation.

How will the development of this goal help you in other areas of your life, studies, and into your future?

Developing this goal will enhance my ability to convey complex technical ideas clearly in any setting, such as explaining algorithms to non-technical stakeholders or presenting project updates in academic settings. Strong communication skills will help me build relationships, present ideas effectively, and adapt to diverse audiences, making me a more effective team member and leader in the future.

As you continue into your third work term, how do you think self-management skills will assist you both in your work placement and in the completion of this course?

In my work placement, self-management skills will help me communicate effectively with everyone. Staying organized, prioritizing tasks, and adapting my messaging based on the audience. For instance, when working with military personnel, I will simplify technical jargon, while with developers, I will focus on precise details. These practices will ensure I thoroughly understand technical concepts, allowing me to present information clearly in different ways to suit various groups.

How will you incorporate self-management skills learned in your previous work term placements into your current placement? How do you feel you can improve upon what you have learned to date?

As I gain exposure to a broader audience at CFB Halifax, I will further refine my ability to communicate technical concepts and solutions effectively. I will apply self-management skills from previous work terms, such as staying organized by maintaining detailed task lists with priority rankings to manage my workload efficiently. Additionally I plan to deepen my understanding of technologies like Ansible, Docker, and Kubernetes.

PROBLEM SOLVING

The Core Employability Skill and Graduate Attribute of **Problem Solving** is to:

- Use appropriate knowledge, skills, background research, and experimentation to identify, investigate, conceptualize, analyze, and solve complex problems to reach substantiated conclusions.

- Design and evaluate solutions for complex open-ended computing problems with appropriate consideration for social, cultural, and economic considerations.
- Recognize that there are often multiple solutions to a presented problem.

Specifically, when focussing on problem solving skills, how will you apply **Decision-Making** skills to a presented problem?

- Evaluate options based on logic, fact, feasibility, and associated risk to determine the best course of action.
 - Assess decisions after each iteration to improve the process and increase the likelihood of success.
 - Communicate decisions, including the rationale and justification, effectively to other stakeholders.
-

My Problem Solving Goal for this work term is to *(in approx. 50 words):*

My goal is to improve my ability to analyze and solve technical challenges efficiently, particularly in network automation. I plan to break down complex problems into smaller, more manageable chunks, allowing me to systematically research and implement solutions.

How have your problem solving skills developed to date helped you in other areas of your life, studies, and into your future? How do you anticipate building on these skills this work term?

My problem-solving skills have helped me optimize workflows, debug programs, and adapt to technical challenges in both academic and professional settings. For example, at Defence Research and Development Canada (DRDC), I developed algorithms to analyze negative data, which improved my analytical thinking. This term, I plan to build on these skills by working on real-world automation problems and learning from experienced colleagues to refine my approach.

As you continue in this work term, how do you think decision-making skills will assist you both in your work placement and in the completion of this course?

Decision-making skills will help me assess different automation solutions, weigh trade-offs, and make informed technical choices. For example, when configuring test networks, I will evaluate the feasibility and risks of different configurations before implementation. These skills will also be valuable in coursework that requires critical thinking and problem-solving, such as designing efficient algorithms.

Ask one of your colleagues, your supervisor, or someone in your network about why they feel decision-making skills are important to develop. What advice did they provide you?

Steph, a colleague and mentor, emphasized that strong decision-making skills are essential for efficient automation and successful project outcomes. She advised me to follow Agile methodologies by iterating quickly, incorporating feedback, and remaining flexible.

PROFESSIONALISM

The Core Employability Skill and Graduate Attribute of **Professionalism** is to:

- Act appropriately with regard to ethical, societal, health, safety, environmental, legal, and cultural issues as they exist within local and global contexts.
- Behave with regard to the consequential responsibilities associated with professional computing practices.
- Recognize personal and professional limitations, including that of resources.

Specifically, how will you apply **Ethics** to your professional demeanor?

- Protect fundamental human rights
 - Minimize negative consequences when designing or implementing computing systems by ensuring that the products of your efforts are used in socially responsible ways, will meet societal needs, and will avoid harmful effects to health and welfare.
-

My Professional Goal in this work term is to *(in approx. 50 words):*

My goal is to improve my collaborative skills in multidisciplinary environments. I plan to achieve this by strengthening my time management skills. By setting clear objectives and deadlines while adhering to ethical and workplace standards, I aim to become a more effective team member.

How will the development of this goal help you in the completion of your studies, and into your future career?

Developing this goal will reinforce accountability, integrity, and adaptability, which are essential in both academic and professional settings. For instance, managing multiple projects will prepare me for balancing coursework and co-op responsibilities. Strong ethical behavior and effective collaboration will help me navigate complex projects, build trust with colleagues, and ensure success in my studies and future career.

As you start this work term, how do you think ethics will apply to you both in your career and in the completion of computer science degree?

Ethics will guide my decision-making, ensuring integrity in my work, responsible handling of information, and adherence to professional standards. At CFB Halifax, I will ensure that network configurations prioritize security and privacy. In my degree, this focus will help me approach my studies with a critical mindset, remaining aware of privacy and security concerns, and emphasizing the importance of ethical considerations in computing.

How do you observe ethics being applied in the workplace?

Yes, at my current placement within the Department of National Defence, privacy and security are continuously prioritized, with strict measures in place to safeguard sensitive information. In my previous placement at DRDC, ethical behavior was evident in the collaborative research environment, where ideas were freely shared and discussed without fear of colleagues taking undue credit. This fostered a safe, professional space that encouraged innovation and teamwork.