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<b>Supervisor's Department</b>	Information Technology
<b>Project Title</b>	Towards Digital Sovereignty – Inclusive and Sustainable Development through the Indigenous Friends Mobile App

**Description of Research Project (1500 characters maximum)**

All over the world Indigenous communities are victims of colonization, racialization, and domination by hegemonic societies that hinder processes of inclusion and social development. The consequences of this process are strongly felt in Canadian Indigenous communities, which face economic marginalization, forced assimilation, and cultural discontinuity on an on-going basis, which exacerbates issues of domestic violence, mental health, substance abuse, educational inequity, among others. Indigenous youth in Canada face a constant struggle to find meaningful Indigenous representations in mainstream pedagogy as it largely ignores Indigenous histories, ways of learning, worldviews, and perspectives.

Our creation of the Indigenous Friends App employs an inter-and trans-disciplinary creative process to address the on-going challenges encountered by Indigenous students and to respond to non-Western ways of knowing. In contrast, technological innovations created to contribute to the sustainable development of marginalized communities frequently adopt mainstream technological methodologies that often exacerbate existing power relations, and therefore, generate inefficient tools for development. The purpose of Digital Sovereignty is to start a long-term process of decolonization by resisting mainstream software engineering methodologies, and instead, adapting and altering these techniques to match Indigenous understandings and ways of knowing. Training Indigenous developers in these new methods may then achieve a genuinely sustainable form of Good Living for Indigenous communities.

**Undergraduate Student Responsibilities (1500 characters maximum)**

The Indigenous Friends App involves highly integrated tracks of research and development. On the research side, we are focused on such issues as decolonization, eLearning, Indigenous communities, Aboriginal mental health, Intellectual Property, Software Engineering, among others. To support this research, we are not only developing the app and its code base, but we have also developed new protocols for feature selection and design. Where allowed by our existing approved ethics protocols, the undergraduate student will participate in several learning circles and help to convert these community consultations into new features for the app.

App development will include addressing technical challenges such as push notifications which will involve information and interactions stored in multiple databases. Privacy is also a significant concern which will consist of database organization and information structures (e.g. containers, NoSQL databases) which are more complicated than typical cloud-based infrastructures. All of this development will occur in a team-based environment with multiple developers updating and managing various threads simultaneously.

**Qualifications Required (750 characters maximum)**

Strong technical skills (e.g. ITEC3020 and ITEC3220). The ability to work and communicate with a team of developers. Previous background or a desire to learn more about First Nations, Indigenous, and Aboriginal Canadians.

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