

2022 Projects

Version 1

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- **Data Analytics and Communication Services for Career Services Professionals (*Funded by Mitacs – Business Strategy Internship*):**

Skill Squirrel has developed a platform that is designed to help people changing careers access relevant services. It offers purposeful matchmaking between job seekers, learners, trainers and employers, while also reducing the workload of career service organizations (CSOs) and professionals that offer job search assistance, education recommendations and training programs. Through this Mitacs internship, Skill Squirrel wishes to enhance its Early Adopter Program (EAP), so CSOs can achieve a better understanding of their client's needs and achievements. The main goal is to update the existing Skill Squirrel platform with new features such as a data dashboard and user-to-user communication services. The enhancement will support small, private and public career and education service providers, who rely heavily on government funding, which is often not paid until a job seeker has been employed for one year. Affordable access to tools like chat and other customer support services, is expected to sustain small organizations, improve client communication and help Canadians find and keep jobs.

- **Advanced Solar Photovoltaic (PV) Data Analysis and Performance Predictor Using Edge Computing (*Funded by Mitacs Accelerate*):**

Voltaire Power is a privately held Canadian company that has developed algorithms and a distinctive coding system to predict electricity production of solar photovoltaic (PV) systems using PV power-plant design and environmental conditions as inputs. Currently, PV power-plant owners and operators are able to measure solar system performance; however, the full potential of the PV power plant may not be realized without accurately measuring solar irradiation, both diffuse and direct, combined with other environmental data.

This project between Voltaire Power and Seneca Innovation focuses on giving commercial or industrial property (i.e. non-solar professional) owners and facilities managers the ability to accurately calculate the predicted output of a solar plant and compare it to what the plant is actually producing. The comparison will give people a way to monitor for, pick

up on and rectify issues with their solar plant, ensuring a return on investment. The predictive comparative outputs will be created with external sensors in the solar plant that communicate with a mini-computer to process the data. Finally, the information will be sent to a cloud service for data storage, analysis and display.