RURAL OUTREACH STUDENT NEWSLETTER

25 APRIL, 2025 | VOLUME 07

ABOUT THE PROGRAM

The Rural Outreach program aims to support rural communities in Newfoundland & Labrador with projects, plans, and proposals. Supervised by Brian Peach and Stephen Bruneau, their team of dedicated engineering students offers a wide variety of free services, including 3D model development, funding applications, 911 mapping, website development, 360-degree photography and much more.

Mary's Harbour
West St Modeste
Main Brook
Englee
Castor River South
Pilley's Island
Change Islands
Embree
Comfort Cove - Newstead
Irishtown - SummerSide
Botwood
Northern Arm
Massey Drive
Peterview
Charlottetown
Appleton
Champneys West
Heart's Delight - Islington
Stephenville Crossing
Pasadena
Badger
Come By
Chance
Pouch Cove
Logy Bay -
Middle Cove -
Outer Cove
Colinet
Bellevue
Beach
Terrenceville
St. Albans
Baine Harbour
South River
Mount Carmel
Channel-Port aux Basques
Placentia
Burgeo
Renews - Cappahayden
Rose Blanche - Harbour le Cou
Winterland
Lamaline

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The Rural Outreach program has assisted over 25 communities on the island and continues to search for new challenges to tackle. During the Winter 2025 semester, our team was able to provide expertise to communities for projects. Ranging from 3d modelling, website building, trail mapping, and QGIS mapping. The opportunities provided the students with ways of improving their technical skills and also provided help to communities.

Communities Assisted:

Main Brook	Pasadena	*Chapel Arm*
Massey Drive	*Burgeo*	*Charlottetown*
Change Islands	*Mary's Harbour*	*Cupids*
Peterview	*Appleton*	St. Albans
Heart's Delight - Islington	Bellevue/Bellevue Beach	Brigus
Botwood	Lamaline	Come By Chance
Comfort Cove - Newstead	*Winterland*	Pouch Cove
Englee	*Baine Harbour*	Renews - Cappahayden
Northern Arm	*Mount Carmel*	Placentia
Castor River South	*Irishtown-Summerside*	Rose Blanch-Harbour Le Cou
Badger	*Colliers*	*Embree*
Stephenville Crossing	*Garnish*	*Terrenceville*
Champneys West heritage Group	*Little Burnt Bay*	Pilley's Island
Logy Bay Middle Cove-Outer Cove	*South River*	Colinet

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NEXT GENERATION 911

The Rural Outreach Program worked with the 911 Division of Newfoundland to support their initiative for a new emergency services program known as NG911.

The program seeks to provide improved emergency services using world class telecommunication networks. The Rural Outreach Program created numerous GIS maps of rural communities in Newfoundland to support their initiative.

CIVIC ADDRESSING FOR RURAL TOWNS

The team worked with the NG911 division and aided in multiple civic addressing projects in rural municipalities such as Pilley's Island, Colinet, Bellevue Beach, and Placentia,.

QGIS MAPPING AND CIVIC ADDRESS COLLECTION

The Next Generation 911 (NG911) uses automatic location information (ALI) technology to locate the place of emergency. The accuracy of the ALI depends on the geographic information system (GIS) and civic address data of the municipalities.

ROSU uses QGIS, an open-source GIS tool, to map the buildings' locations in the municipalities. Besides mapping, civic address collection is also required for better tracking. The other applications of QGIS are,

- Economic Development: Tourism and recreation, Mapping trails, parks, and local attractions encourage tourism
- Transparent governance: Sharing GIS data with the public helps build trust and participation in local planning.
- Data-Driven Decision Making: Better grant applications, Rural communities can use GIS maps to support funding requests
- Improved Infrastructure Planning: GIS helps identify areas needing upgrades or maintenance by mapping wear-and-tear trends and traffic flow.

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ROSU COLLABORATIONS

From April 8th-10th. The team travelled to Holiday Inn in St. John's to volunteer and participate in the PMA 53rd Annual Convention & Trade Show.


During the forum, the team hosted a table for the World Café activity, providing an introduction to the services offered by ROSU. This engagement to promote the program resulted in new clients for ROSU.

During the winter, the team collaborated with Atlantic Infrastructure Management Network(AIM) to assist with projects.

The team worked on three main projects: Researching chatbots, managing Excel asset management files, and building an app to track the impact of climate change on a coastal city.
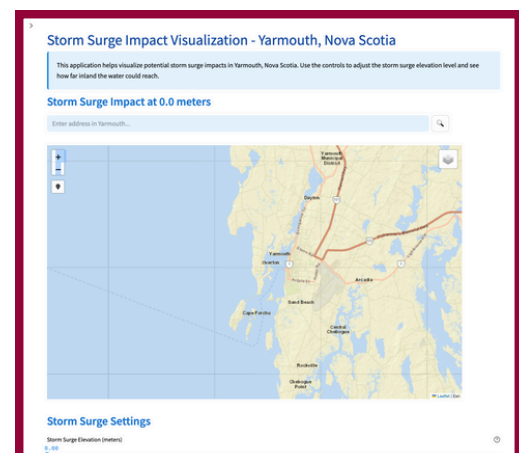
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MAIN BROOK RESEACH AND DEVELOPMENT CORPORATION

The Rural Outreach team assisted the town of Main Brook with the design of two different buildings. One building was for live entertainment as well as being a restaurant. The other building contained a visitor information center and other facilities for visitors coming to Main Brook.

SKETCHUP MODELS

The SketchUp models for both of the buildings are shown below. The first one is the building with the live entertainment and restaurant. The second one is the builiding with the visitor information center.
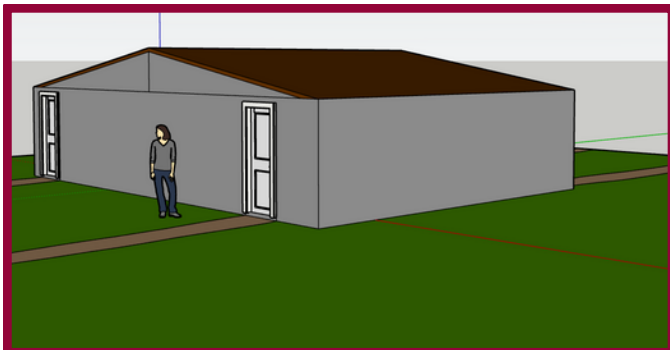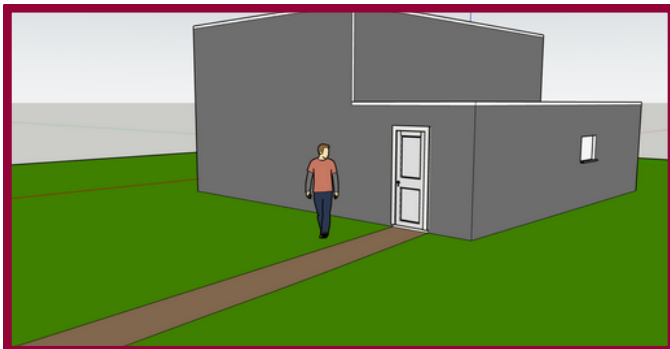

THE TOWN OF NORTHERN ARM

Melinda Freake, Town Clerk of Mary's Harbour reached out to Rural Outreach this semester with an interesting project for the team. The town was looking to create a trail route for a mountin biking trail. The project required using a GIS software (QGIS) to map out a proposed path for the trail.

TRAIL FOR NORTHERM ARM

The trail mapped in the software is made using points and lines:

- **Points:** The points are the corners of the trail.
- **Lines:** The lines are connecting each of the points to make the shape of the trail.

The land survey was placed on top of the map as shown.
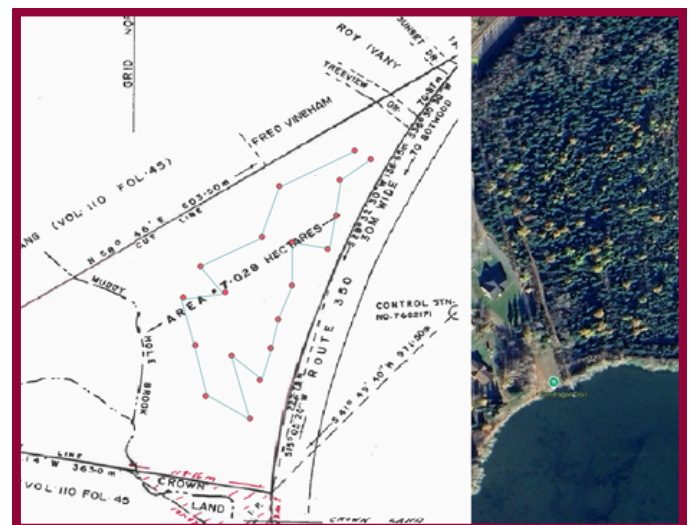
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ROSU WEBSITE DEVELOPMENT PROJECTS

The Rural Outreach team has taken several website development projects, such as website creation and online events calendar, over this semester. Additionally, the team has offered training sessions to ensure that community members can independently manage and update their websites, fostering a sense of ownership and sustainability. Through these initiatives, the Rural Outreach team has not only contributed to the technological advancement of rural areas but also strengthened community ties and supported local growth.

TOWN OF COLINETS WEBSITE

The Rural Outreach team has taken on a website development project for the Town of Colinet. The website was devoloped using Wordpress, and transferred ownership over to the town via Bluehost. The website includes essential information on the towns history, places of interest, and all relevant forms. The website is now available to the public.
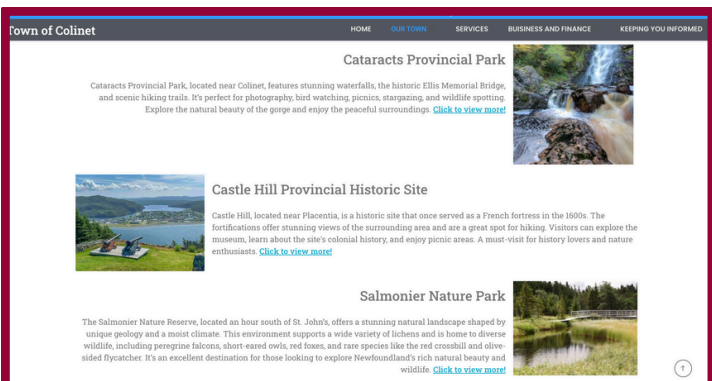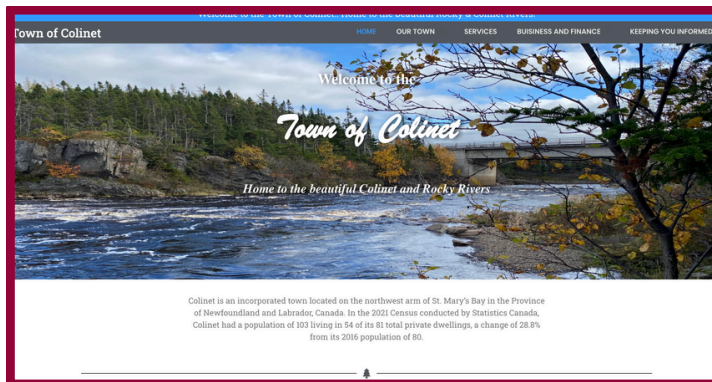
TOURISM WEBSITE FOR CHAMPNEYS WEST HERITAGE GROUP

The Rural Outreach team was approached to update the group's website and build a new one for the aquarium. The website was designed through Squarespace, which makes it easy to make future updates. The team worked on the design, but the group website has not yet been deployed. It will help showcase their attractions, the aquarium, the Fox Island Trail and the Heritage Museum.

GET IN TOUCH WITH US   ruraloutreach@mun.ca
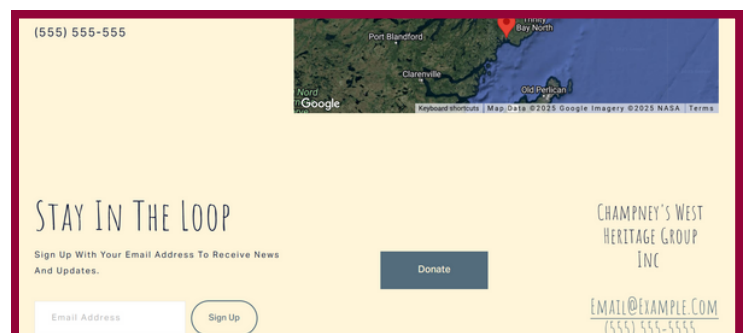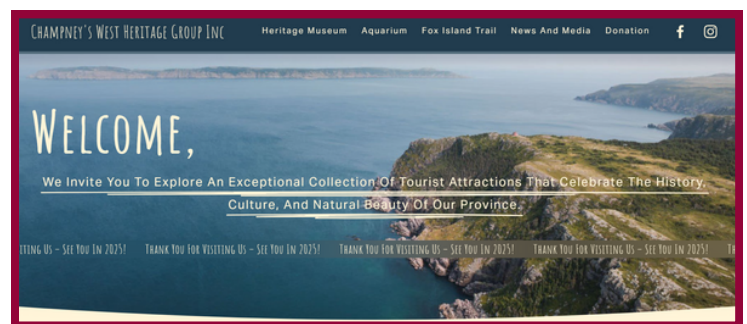
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FEEDBACK FROM CLIENTS WORKING WITH OUR TEAM

" This letter is being sent with much appreciation for introducing the MUN Rural Outreach Program to our municipality; particularly as it is related to 911 Mapping

When we began this project with your team in November of last year, we were excited to finally find a group that could assist us with an undertaking we had been trying to start without much success up to that point. And here we are, just a few months later, with a comprehensive layout and mapping of our community that is not only beneficial to 911 but to our municipality in our planning and development department. The information is invaluable to us.

While we did not interact with all students who may have participated in the two semester work terms, we had close contact with both Anderson and James. It is important to stress that their knowledge of the program and the methodology used to reach the ultimate goal was very impressive. We would appreciate it if you would convey our thanks by providing them with the small token of appreciation enclosed for each of them. "

Gerry Hynes, CAO.
Town of Placentia.

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BENEFITS TO MEMORIAL UNIVERSITY ENGINEERING STUDENTS

The Rural Outreach Project offers engineering students the opportunity to learn about rural municipalities in Newfoundland, bolster expertise with a variety of software programs, devise creative solutions to address challenges faced by rural communities and experience their culture and history personally through site visits.

> *I have had a great experience working with the Rural Outreach Program for two semesters as I got to learn various engineering skills. I also enjoyed the fact that I got to assist various Newfoundland communities. I greatly improved my communication skills during my time with the Rural Outreach Program as I got to regularly meet with members of the municipailties of Newfoundland. I also loved having the oppurtunity to help out with the 2025 PMA conference. Overall, the Rural Outreach Program is a great project for both the students and communities.*

Jack Kennedy, Mechanical Engineering Student

> *During my time with the Rural Outreach program, I learned many useful engineering skills. I built upon my technical skills by becoming familiar with different softwares including QGIS, a mapping tool, and Wordpress, a website builder. I built on my project management skills by balancing multiple projects and deadlines at once, and got to talk with many amazing people across Newfoundland. I really enjoyed helping out small communities who may not have gotten help otherwise. Overall, the Rural Outreach program was a great experience and I recommend others check it out!*

Joey Shea, Electrical Engineering Student

> *The rural outreach program has taught me many new technical skills, like QGIS, Autocad and SketchUp, which I can apply in my future endeavours. Working in different communities and projects allowed me to improve soft skills like time management and communication. The program also provides network opportunities, as we were involved with teams like the AIM network and PMA. Overall, this has been a successful first work term, and I will recommend this to any student trying to get a work term. I will also be thankful to our supervisor, Brian, for providing more than enough help with any projects we were working on. I hope for the continued success of the program.*

James Onajobi, Mechatronics Engineering Student

Jack Kennedy
Mechanical Engineering Student

EMAIL
jackk@mun.ca

PHONE NUMBER
1-709-683-6195

" Jack Kennedy is a mechanical engineering student with a strong passion for problem solving and is returniung to the Rural Outreach Program. He is from the rural Town of South River which provides him with a unique perspective of the needs of rural municipalities. Jack is an excellent team member that can work with various town officials to assist the rural communities of Newfoundland. His experience and expertise will greatly benefit the municipalities working with the Rural Outreach Program. "

James Onajobi
Mechatronics Engineering Student

EMAIL
jionajobi@mun.ca

PHONE NUMBER
1-709-630-7060

" James Onajobi is a second-year mechatronics engineering student embarking on his first work term, and he is excited about the opportunity to contribute to the outreach program; he has experience in 3D modelling and coding through projects. His skills include Solidworks, Fusion 360, python and C++. He is passionate about collaborating and exchanging information to impact rural communities through engineering. He is interested in teamwork, problem-solving, and project management. He is ready to connect and provide his expertise. "

Joey Shea
Electrical Engineering Student

EMAIL
joeys@mun.ca

PHONE NUMBER
1-709-266-7601

" Joey Shea, a second-year Electrical Engineering student on his first work term, is excited to contribute to the Rural Outreach Program and support communities across Newfoundland and Labrador. He has experience with software applications, coding, and 3D modelling and is eager to apply these skills to projects like community mapping, website design, and more. Joey is passionate about solving problems, and working collaboratively, and looks forward to creating lasting, positive change in rural areas. "

WINTER 2025 Focus: Community Development, 3D Rendering, Trails, 911 Mapping, Community Websites/Conference Volunteers, Asset Management