ESRI Canada 2025 App Challenge

Team Name:

Mustangs for Housing Equity

Personal Biographies:

Samantha Sharp:

Hi, I'm Samantha Sharp! I'm a third-year student at the University of Western Ontario in the Geographic Information Science (GIS) program currently working towards my Honours Specialization. My studies are reflective of my interest in practical data applications that can be used to enhance the knowledge base of the general public. I aim to use open-source data to produce accessible outputs that inform individuals on social, economic, and political issues that impact their lived environments!

Nicholas Chen:

Hi, I'm Nicholas Chen! I'm currently working towards a BA in Geography and Environment, specializing in Commercial Aviation Management. I'm also completing a certificate in Geographic Information Systems (GIS). My studies reflect my passion for understanding how spatial analysis and aviation intersect, and I'm excited about using GIS to solve real-world challenges. Whether it's mapping complex systems or exploring innovative solutions in transportation and environment, I'm driven to combine technology and geography to make a meaningful impact.

Angelica Simone:

Hi, I'm Angelica Simone! I am a third year student at the University of Western Ontario double majoring in Geographic Information Science (GIS) and Psychology. My studies reflect my passion for understanding spatial patterns and human behavior, and I'm especially interested in how data-driven insights can improve decision-making in social and environmental contexts. I aim to analyze spatial trends or explore cognitive influences on perception, and I enjoy combining technology and psychology to tackle real-world challenges in innovative ways.

Team Photo:

Team Mission Statement

Our team aims to create accessible and digestible content for the general public in order to be able to understand and even reproduce GIS products. We therefore exclusively used open source data so that all of our sources could be verified or applied by viewers without requesting permission from data owners. Despite the complexity of the analysis techniques that we used, we ensured that the completed product was available as a dashboard with toggles and explanations for each layer and function of the map. The general public can become informed of issues on housing affordability. By using our app they are able to navigate which neighbourhoods may be sustainably affordable based on their income. Governments and NGOs may also navigate through the vacancy rates in the Metro Vancouver Regional District area to identify where housing development may be required. Ultimately, by having open source data and making an accessible final app, our team will be actively supporting awareness and understanding of the Vancouver housing market, and broadly GIS products.

Appealing Characteristics

Our app is uniquely user-friendly, making it appealing, useful, and interesting as the following features enhance the user experience;

Interactive Dashboard

The app features an intuitive, interactive dashboard that allows users to easily toggle between different layers and data points. Whether exploring housing affordability, vacancy rates, or income comparisons, users can seamlessly navigate through the data with clear instructions and explanations. This makes it easy for anyone, regardless of GIS knowledge, to understand complex data.

User-Friendly Interface

The design is clean, simple, and visually appealing. The interface is easy to navigate, with clear buttons, labels, and tooltips that guide the user throughout the app. This ensures that anyone can interact with the map without feeling overwhelmed by complex data points or technical jargon.

Open Source Data

By exclusively using open-source data, our app ensures that all information is transparent, verifiable, and accessible to anyone. This promotes trust and allows users to explore and even replicate the analysis themselves, which is key to fostering greater understanding and engagement.

Customizable Features

The app allows users to tailor the analysis to their personal circumstances. For example, users can input their income level and see which neighborhoods are within their affordable range, helping them make more informed decisions about where they may want to live.

Clear Explanations and Context

Each map layer and data point comes with detailed explanations, ensuring that users understand not just the data, but also how it was collected and what it represents. This educational aspect makes the app an invaluable tool for anyone seeking to learn about housing affordability in Vancouver.

Focus on Housing Equity

The app addresses a pressing social issue—housing affordability—by giving users insight into which areas of Metro Vancouver Regional District may be more sustainable for living based on their income. It also provides valuable information to policymakers and NGOs, helping them

identify areas where development or intervention is needed to ensure equitable housing opportunities.

Engagement and Awareness

The app actively supports awareness and understanding of the housing market by providing an easy-to-use tool that anyone can access, from community members to organizations working in the housing sector. The ability to visualize data and explore possible solutions empowers users to make informed decisions and advocate for necessary change.

By focusing on accessibility, transparency, and ease of use, our app stands out as a valuable resource that makes complex GIS data approachable and useful for a wide range of users. Whether you're an individual trying to find affordable housing or a policymaker looking for data-driven insights, our app makes it possible to understand the nuances of the Vancouver housing market and make informed decisions based on reliable, open-source data.

Link to App

https://www.arcgis.com/apps/dashboards/ca07db1060dd4b2194d91109e3c41840

Link to Story Map

https://arcg.is/X5fmP1