

What Gets Accepted — Selection Criteria Analysis

Based on analysis of all 23 accepted projects across 3 cohorts (Spring 2023, Fall 2023, Spring 2024).

Inferred Scoring Rubric

Factor	Weight	What Reviewers Look For
Canadian/Community Focus	High	Problem directly affects a Canadian community. Local stats preferred.
Clear ML Application	High	Obvious ML task (prediction, classification, NLP, CV). Not forced.
Data Availability	High	2-3 identified datasets. Open data ideal. Honest about gaps.
Quantifiable Impact	Medium	Specific statistics showing scale of problem.
Feasibility in 2 Months	Medium	Scoped narrowly enough for undergrads to deliver a demo.
Novelty	Medium	Fresh angle, not repeating past cohort projects.
Equity/Diversity Angle	Medium	Aligns with RBC Borealis + CIFAR inclusion mission.
Personal Connection	Low-Med	Team has lived experience or passion for the cause.
Technical Sophistication	Low	Simple models are fine. Random Forest to LLM — all accepted.

Patterns in Accepted Projects

Domain Distribution (23 projects)

- Healthcare: 7 (30%) — ED wait times, radiology, stroke, anesthesia, transplant, glioblastoma, food bank
- Environment: 5 (22%) — wildfire x2, earthquake, crop yield, radon
- Social services: 4 (17%) — shelter x2, scholarship matching, food bank
- Accessibility/Mental health: 4 (17%) — ASL, chatbot, crisis companion, mental health
- Safety: 2 (9%) — driving behavior, tornado
- Education: 1 (4%) — feedback summarization

ML Techniques Used

- Classification/prediction: Most common (Random Forest, XGBoost, neural nets, regression)
- NLP/LLM: 2-3 projects (chatbot, crisis companion)
- Computer vision: 2-3 projects (fire detection, radiology, ASL)
- Forecasting/time series: 3-4 projects (shelter demand, ED arrivals, tornado)

What All Accepted Projects Share

1. Problem stated in first paragraph with a specific Canadian statistic

2. ML approach is a natural fit (not shoehorned)
3. At least one dataset identified (even if imperfect)
4. Solution leads to an actionable outcome (not just analysis)
5. Feasible demo in 2 months (web app, dashboard, model + evaluation)

Topics to Avoid (Overdone or Risky)

Topic	Why Avoid
Shelter bed forecasting	Done in both Fall 2023 and Spring 2024
Wildfire prediction (fire detection)	Done in both Fall 2023 and Spring 2023
Generic mental health chatbot	Done in Fall 2023 (MindTech)
Generic food waste	Done in Spring 2023 (FoodGPT)
Too-broad "climate change"	Hard to scope, no clear ML task
Pure NLP on social media	Hard to get actionable community impact

What Would Stand Out

- **Under-explored domains:** Indigenous issues, housing, transit, opioid crisis, air quality/health
- **Equity-centered problems:** First Nations water, food deserts in low-income areas, immigrant services
- **Timely issues:** Post-2023 wildfire health impact, opioid crisis escalation, housing affordability crisis
- **Novel ML angles on familiar problems:** Health impact of wildfires (not fire detection), community-level risk prediction (not individual patient)