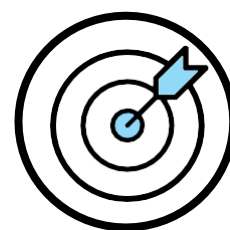


Hacking Education: What Does Data tell us About K-12 in BC?

In the era of massive technological and societal change, there is perhaps no endeavour more important than preparing young people for success through universal access to high quality education.

The K-12 education system in BC generates vast amounts of data on both inputs and outcomes. It includes, but is by no means limited to: class sizes, special needs requirements, courses offered and taken, graduation eligibility rates, and university admission rates. A substantial portion of this data has been aggregated to protect privacy and is publicly available.

Our challenge is to use the data to understand the challenges and opportunities in K-12 education, identify what works and what does not, and offer impartial, data-driven suggestions as to how to improve educational outcomes for all British Columbians.



In doing so, we will learn details of an important industry, investigate challenges of working with public datasets, and link disparate datasets to make policy/business recommendations that are realistic and actionable.

Judging Criteria:

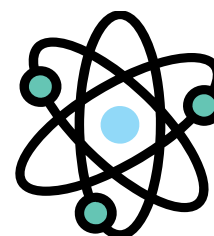
Entries will be judged in three equally-weighted categories:

- Project plan
- Technical skill
- Presentation

Criteria 1: Strategic Planning

In this category, contestants will be judged on the following:

- Identifying a relevant practical problem or potential area of improvement that could be addressed through this project
- Identifying potential stakeholders who would be interested in the results of the project
- Identifying potential actionable insights for stakeholders resulting from the project (what are the “so what’s”?)
- Identifying key obstacles to project success
- Presenting a plan on how those obstacles could be overcome



Criteria 2: Technical Feasibility

In this category, contestants will be judged on the following:



- Data preparation and cleaning
- Data model and dataset linkage
- Feature engineering
- Applicability of data analysis techniques
- Reliability/robustness of the methodology
- Insight generation

Criteria 3: Business Presentation

In this category contestants will be judged on the following:

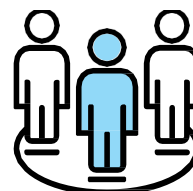
- Clarity of presentation
- Identifying and presenting key insights
- Visualization
- Linking identified problems to the solution (story telling)
- Succinctness



Pitches:

First Round: 8 min presentation, 2 min Q&A (10 min total)

- Submit presentation before 4:45pm
- Teams 1-5 will present to Judging Panel A
- Teams 6-10 will present to Judging Panel B
- Presentation sequence will be randomly generated
- 3 teams will be selected for final round



Final Round: 10 min presentation, 5 min Q&A (15 min total)



- Top 3 teams will present to the entire group and all the judges
- Presentation sequence will be randomly generated
- One winning team and one second prize
- Golden tickets may be assigned to outstanding individuals

Prizes:

First Prize: \$500 per team + individual 30-minute one-on-one career coaching with a team member of your choice (data scientist, data engineer, strategy, and general management consulting)

Second Prize: Join in on an Omnia Breakfast and Learn session including an office tour

Outstanding Individual Performers: Interview Golden Tickets with the Omnia AI team





Teams:

Team 1

Andrew	Ng
Shiner	Yang
Chuangxin	Xia
Alice	Kim
Prakhar	Sinha
Najeeb	Qazi

Team 2

Amir	Muhammadzadeh
Augustine	Wong
Ze	Chen
Rajat	Dubey
Charmaine	Viaje
Brian	Yeung

Team 3

Kristy	Siu
Alexander	Jancso
Ankita	Kundra
Hasti	Hosseinizand
Hyunsung	Shin

Team 4

Woody	Iu
Yilun	Lu
Krishna Chaitanya	Gopaluni
Doru	Kesriyeli
Simon	Roberts

Team 5

Nicole	Huynh
Louis	Luo
Abhishek	Sundar Raman
Jacques	Marais
Tiffany	Wu

Team 6

Sean	Hsiung
Zhen	Mu
Kavya	Balajepalli
Yi	Xiao
Priscilla	Choi

Team 7

Arunit	Grover
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Jayanth	Athreya
Pegah	Zarei
Tana	Bold
Peiyu	Cui
Anyi	Bao

Team 8	
Boyang	Fan
Andrea	Blobel Perez
Hao Sheng	Zhang
Shiying	Wang
Inderpartap	Cheema
Yahui	Zhan

Team 9	
Anvesha	Dwivedi
Katherina	Shen
Mohsen	Seifi
Ruidan	Ni
Zining	Wang

Team 10	
Brent	Hanover
Jessica	Chung
Nitin	Malhotra
Vivek	Anand
Haiyang	Jiang

Short info on some of the publicly available education data for BC:

BC Schools eligible to graduate rate

<https://catalogue.data.gov.bc.ca/dataset/bc-schools-eligible-to-graduate-rate>

BC schools course enrolment and completion by school

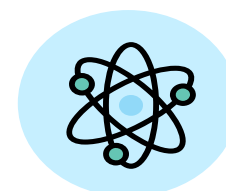
<https://catalogue.data.gov.bc.ca/dataset/bc-schools-course-enrolment-and-completion-by-school>

Projection of Public School Aged Headcount Enrolments

<https://catalogue.data.gov.bc.ca/dataset/projection-of-public-school-aged-headcount-enrolments>

Annual enrolments, historical and projected for all grades across different school districts in BC.

Class size by Composition



<https://catalogue.data.gov.bc.ca/dataset/class-size-by-composition>

Composition of K-12 classes broken down by district, type of school with a particular emphasis on the number of students with special learning needs including English-language learners and students with individual education plans.

Class Size by Grade

<https://catalogue.data.gov.bc.ca/dataset/class-size-by-grade>

Number of classes by subject and grade by district and individual schools.

BC Schools Satisfaction survey responses

<https://catalogue.data.gov.bc.ca/dataset/bc-schools-satisfaction-survey-consolidated>

<https://catalogue.data.gov.bc.ca/dataset/bc-schools-satisfaction-survey-consolidated-alternate-responses->

Summary of responses to the satisfaction survey across a variety of topic related to K-12 education. Survey was covering students, parents and teachers.

BC Schools - Grade to Grade Transition

<https://catalogue.data.gov.bc.ca/dataset/bc-schools-grade-to-grade-transition>

Rate of transition of students from grade to grade, segregated by district, school, gender and aboriginal status.

BC Schools – Class size

<https://catalogue.data.gov.bc.ca/dataset/bc-schools-class-size>

Average class sizes by grade, school region and several other criteria.

BC Schools - School District Funding Allocation

<https://catalogue.data.gov.bc.ca/dataset/bc-schools-school-district-funding-allocation-2009-2010>

Detailed breakdown of funding allocations for school districts over number of years, looking at factors such as enrolment, educator salaries, student special needs etc.