

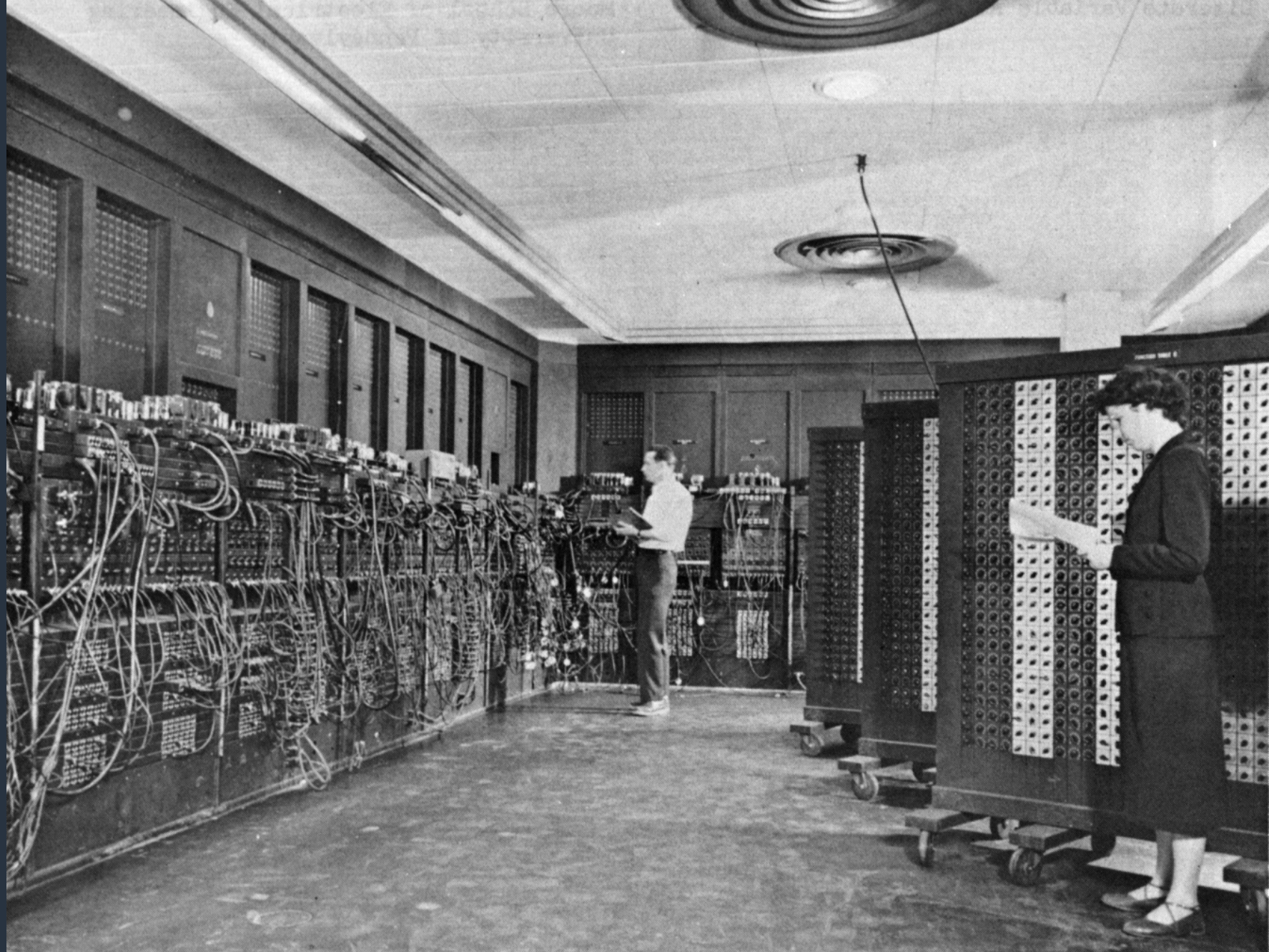
AI at Your Service

SEDA Provincial Summit 2024

ENIAC

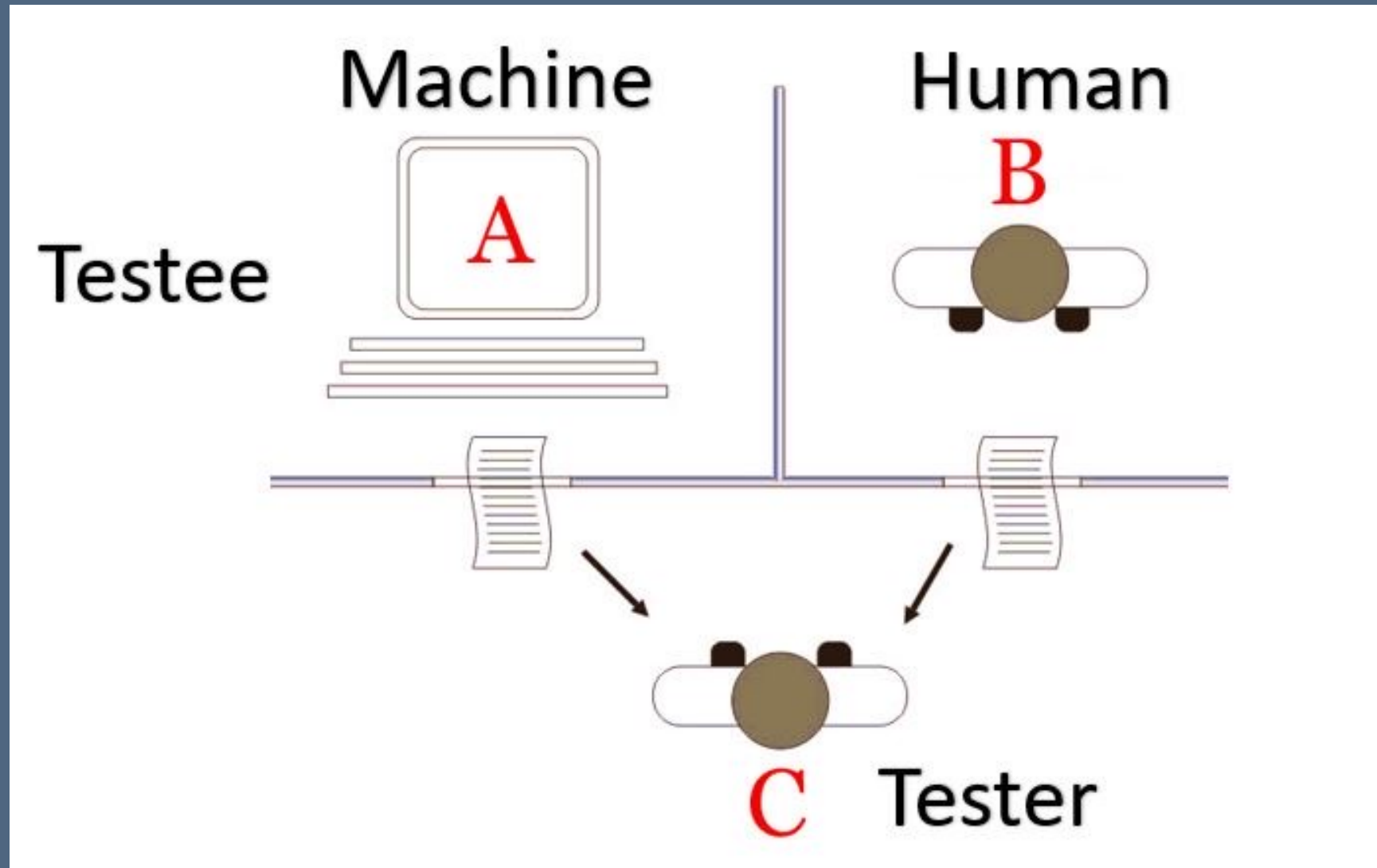
Electronic
Numerical
Integrator and
Computer

1st programmable
machine developed in
1945



Turing Test

Machine response
indistinguishable
from human



Kasparov Vs Deep Blue

In 1996 and 1997

4:2 and 2½:3½



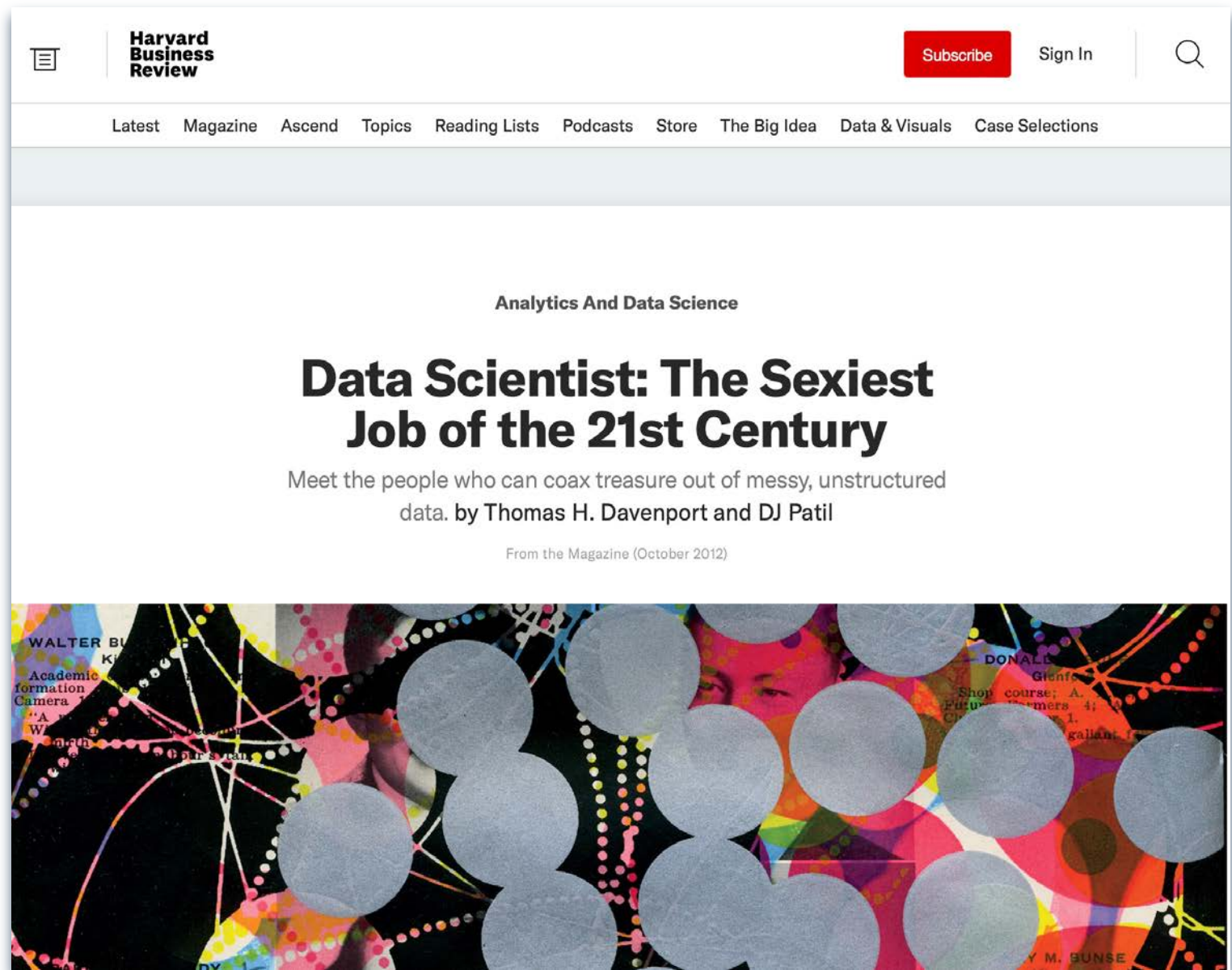
Enablers

Buzzwords that propelled accelerated advance

- Cloud Computing
- Big data
- Machine Learning

Data Scientist - the sexiest job of 2021 century

<https://hbr.org/2012/10/data-scientist-the-sexiest-job-of-the-21st-century>



Mass-education

First Data Science MOOC
("Massive open online
course")

Enrolled 1.76 million
students in inaugural class

<https://simplystatistics.org/posts/2015-02-05-johns-hopkins-data-science-specialization-top-performers/>

Johns Hopkins Data Science Specialization Top Performers

AUTHOR

Ira Gooding

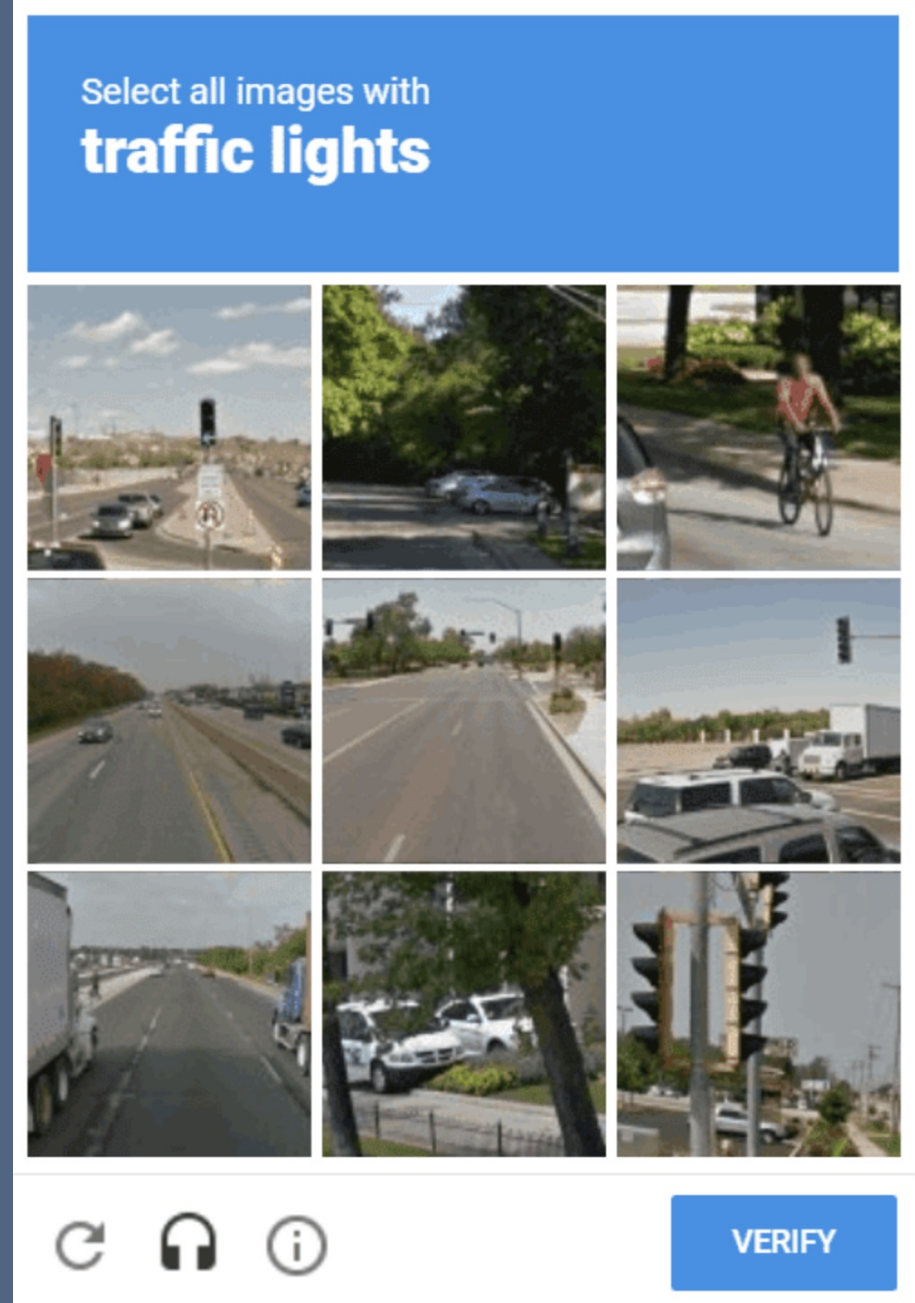
PUBLISHED

Feb. 4, 2015

Editor's note: The Johns Hopkins Data Science Specialization is the largest data science program in the world. Brian, Roger, and myself conceived the program at the beginning of January 2014, then built, recorded, and launched the classes starting in April 2014 with the help of Ira. Since April 2014 we have enrolled 1.76 million student and awarded 71,589 Signature Track verified certificates. The first capstone class ran in October - just 7 months after the first classes launched and 4 months after all classes were running. Despite this incredibly short time frame 917 students finished all 9 classes and enrolled in the Capstone Course. 478 successfully completed the course.

ML applications

- Image classification (reCAPTCHA)
- Spam filtering
- Recommendation systems (Amazon)
- Computer vision (self-driving cars)
- Voice recognition (Siri, Alexa)
- Healthcare
- Fraud detection (finance)
- Marketing campaign optimizations
- Forecasting



Where we are today



VIDEO

See this video at <https://cityviz.ca/seda-provincial-summit-2024-presentation>



Risks

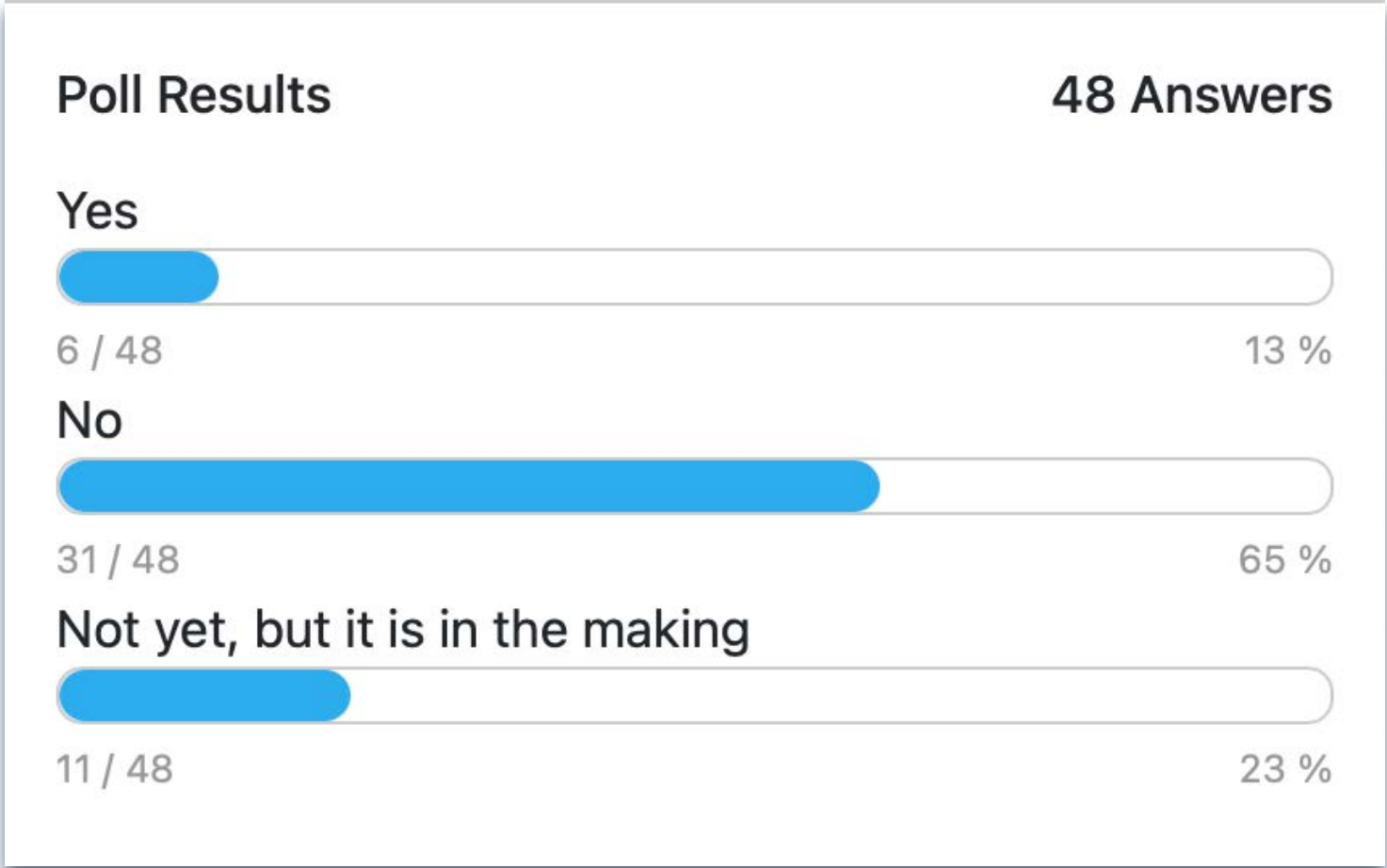
- Privacy
- Data being transferred to servers outside of Canada
- Accuracy of AI output
- Ethical concerns
- Controversies

Unstoppable Progress

Luddites – English textile workers destroying machines in 19th century



Does your organization have a policy for using AI at work?





Solutions

ChatGPT alternatives (there are many!!)

Self-hosted open-source AI models

ChatGPT Alternatives

- Well-known tech companies
 - Microsoft
 - Google
 - Meta (Facebook)
 - Apple
 - ...

French Connection

Less well-known French tech companies

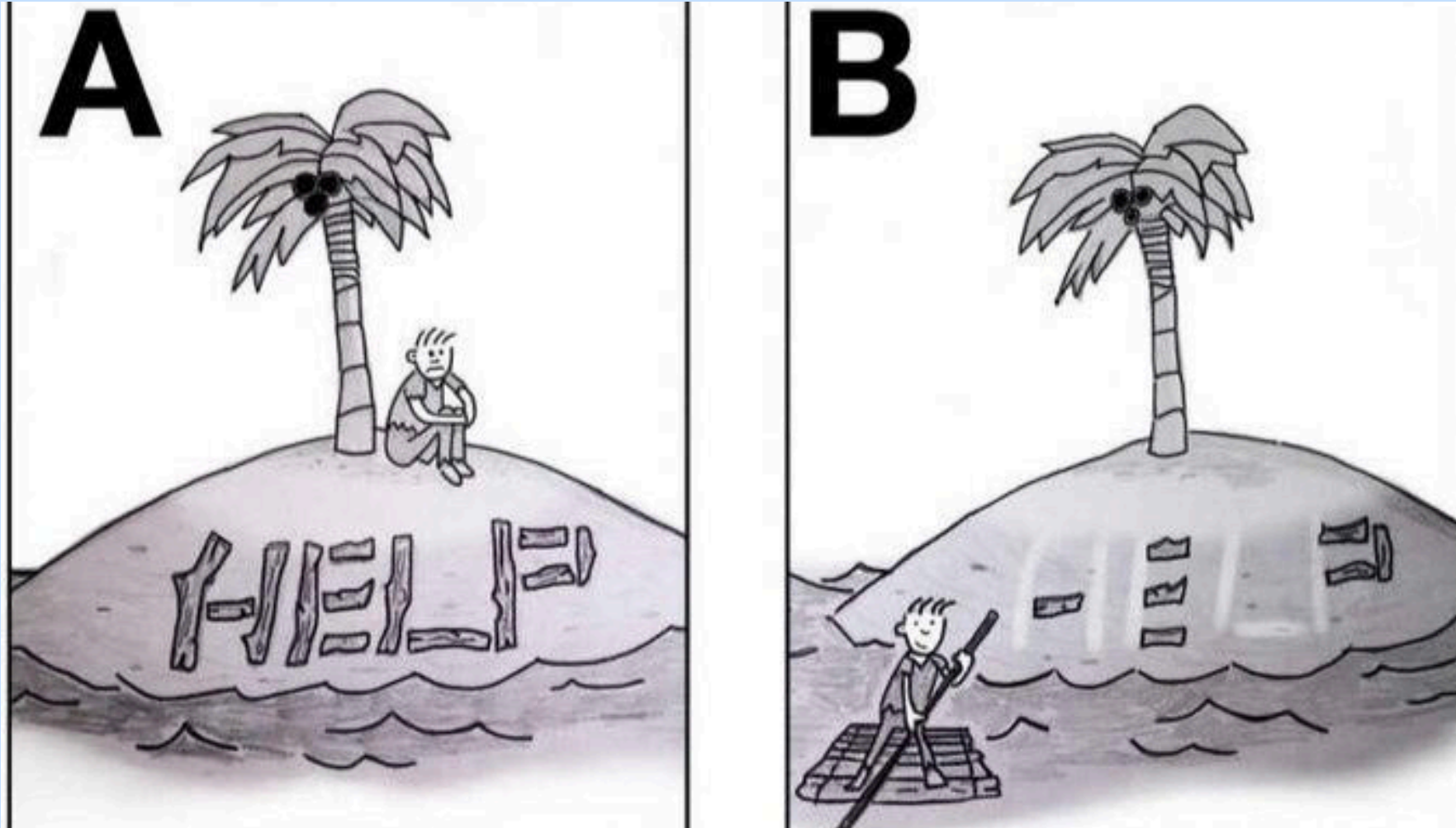
- Mistral
- Claude-2

Assessing accuracy

Benchmarking using standardized tests for

- Language understanding
- General knowledge & common sense
- Reasoning skills
- Coding

It's not what you have, it's what you do with it



Fine-tuning the LLM models

- **Define the AI assistant role** (for example economic data analyst)
- **Provide the context of the analysis** (for example population change)
- **Provide clear description of the expected outcomes from the AI**
- **Rinse and repeat as needed**

CityViz AI Assistant for Economic Development

The screenshot displays the CityViz AI Assistant interface. On the left, a sidebar contains navigation options: Modelfiles, Prompts, Documents, a search bar, and a 'New Chat' button. The main chat area shows a user message: "File Analysis Request". The AI response, generated by Llama3:Latest on 08/05/2024 at 09:58, begins with a thank you and an offer to analyze population change data in Bellaville. It includes a table of data from 2018 to 2022, followed by a section on 'Key Trends' and 'Recommendations'.

2018-01-01	Bellaville	204	235	76	63	13	30	-9	80	208
2019-01-01	Bellaville	205	259	66	42	23	25	93	134	155
2020-01-01	Bellaville	196	268	80	22	9	16	80	137	-169
2021-01-01	Bellaville	212	284	46	47	9	24	104	129	-141
2022-01-01	Bellaville	211	302	155	66	10	39	0	180	-27

Key Trends:

- Population growth:** The city has experienced a steady population growth over the years, with a few fluctuations. The average annual growth rate is around 0.5%.
- Migration patterns:** Most of the population growth comes from internal migration (intraprovincial and interprovincial), while net temporary emigrants and returning emigrants also contribute to the growth.
- Births and Deaths:** Birth rates are generally higher than death rates, indicating a natural population increase.

Recommendations:

- Target younger demographics:** The data suggests that the city's population growth is driven by internal migration, particularly among younger age groups (e.g., 15-34 years old). To attract more residents, focus on marketing strategies targeting this demographic.
- Emphasize quality of life and education:** Bellaville should highlight its strong educational institutions, cultural attractions, and overall quality of life to appeal to young professionals and families.
- Enhance workforce development:** Offer training programs and apprenticeships to attract skilled workers and entrepreneurs, which would boost the local economy.
- Improve transportation infrastructure:** Enhance public transportation options and pedestrian-friendly infrastructure to make the city more attractive to residents who value convenience and sustainability.

VIDEO

See this video at <https://cityviz.ca/seda-provincial-summit-2024-presentation>

What are your time-consuming tasks when preparing reports and presentations?

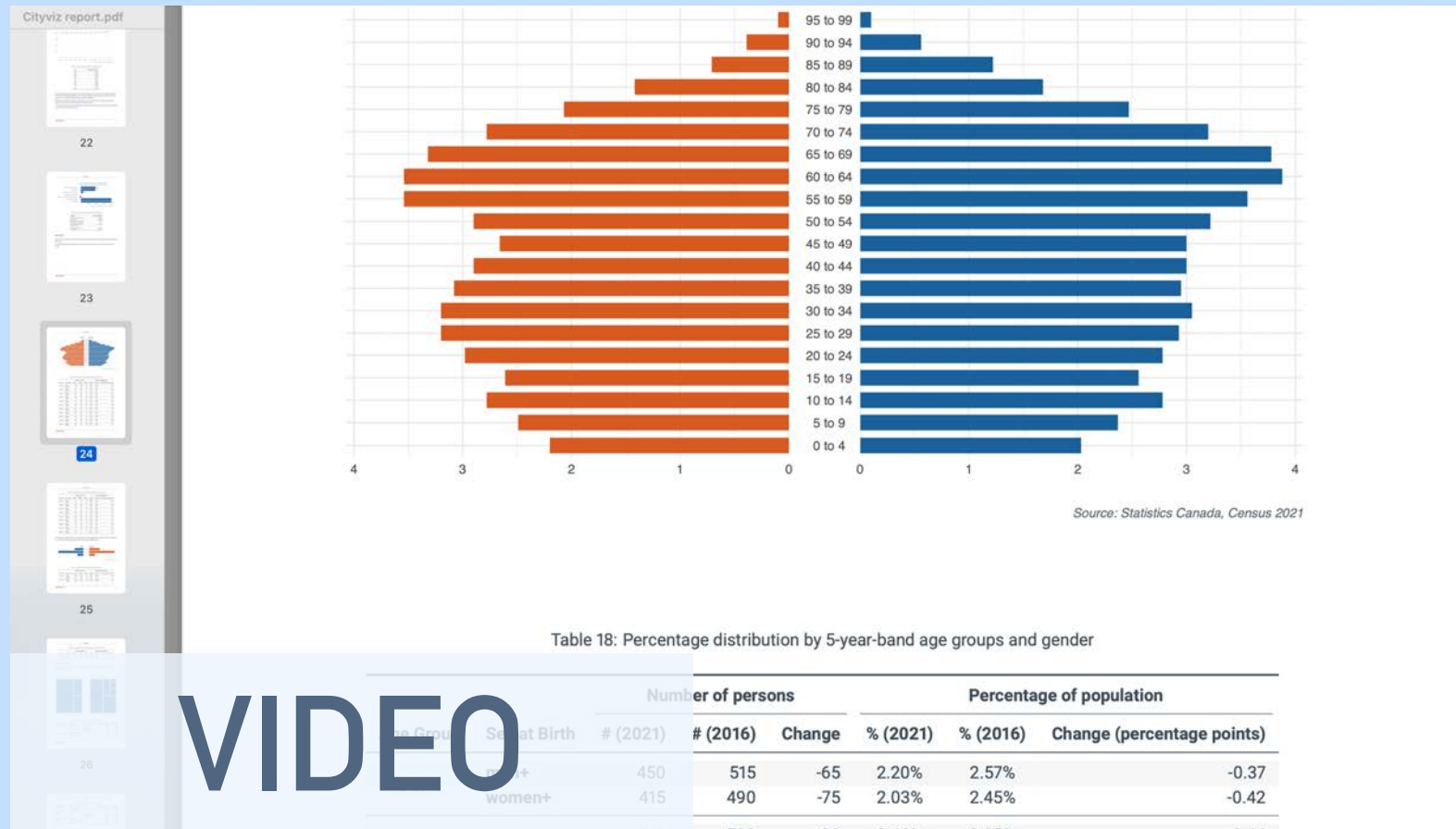
RESEARCH

- Researching information
- Research
- research research research
- Data
- Compiling data
- Fact checking
- Getting the technical details completed and understanding the audience to present
- Gathering and confirming stats
- maintaining data and outcomes.
- Content preparation

FORMATTING

- Formatting. Need to better use AI!
- Visuals and graphics
- Engaging PowerPoint slides
- organization of the material
- Formatting
- Proof reading
- Putting it together
- Compilation
- Creating the PowerPoint and speaking notes

AI-powered PDF and PowerPoint presentations



See this video at <https://cityviz.ca/seda-provincial-summit-2024-presentation>

PowerPoint with a few clicks

1 Example report

2 Age Groups

3 The following chart compares the distribution of household income bands before and after tax.

4 **Household income**
The following chart compares the distribution of household income bands before and after tax.

5 Immigration

6 Immigration

Household Income

Median household income in City of Bellaville is \$80,000 (Census 2021).

Based on low-income cut-offs, after tax (LICO-AT), 2.3% of households are considered low-income households.

Based on low-income measure, after tax (LIM-AT), there is 9.1% low-income households.

Household income bands

The following chart compares distributions of household income bands before and after tax (Census 2021).

Household income bands

Distribution of household income bands compared before and after tax

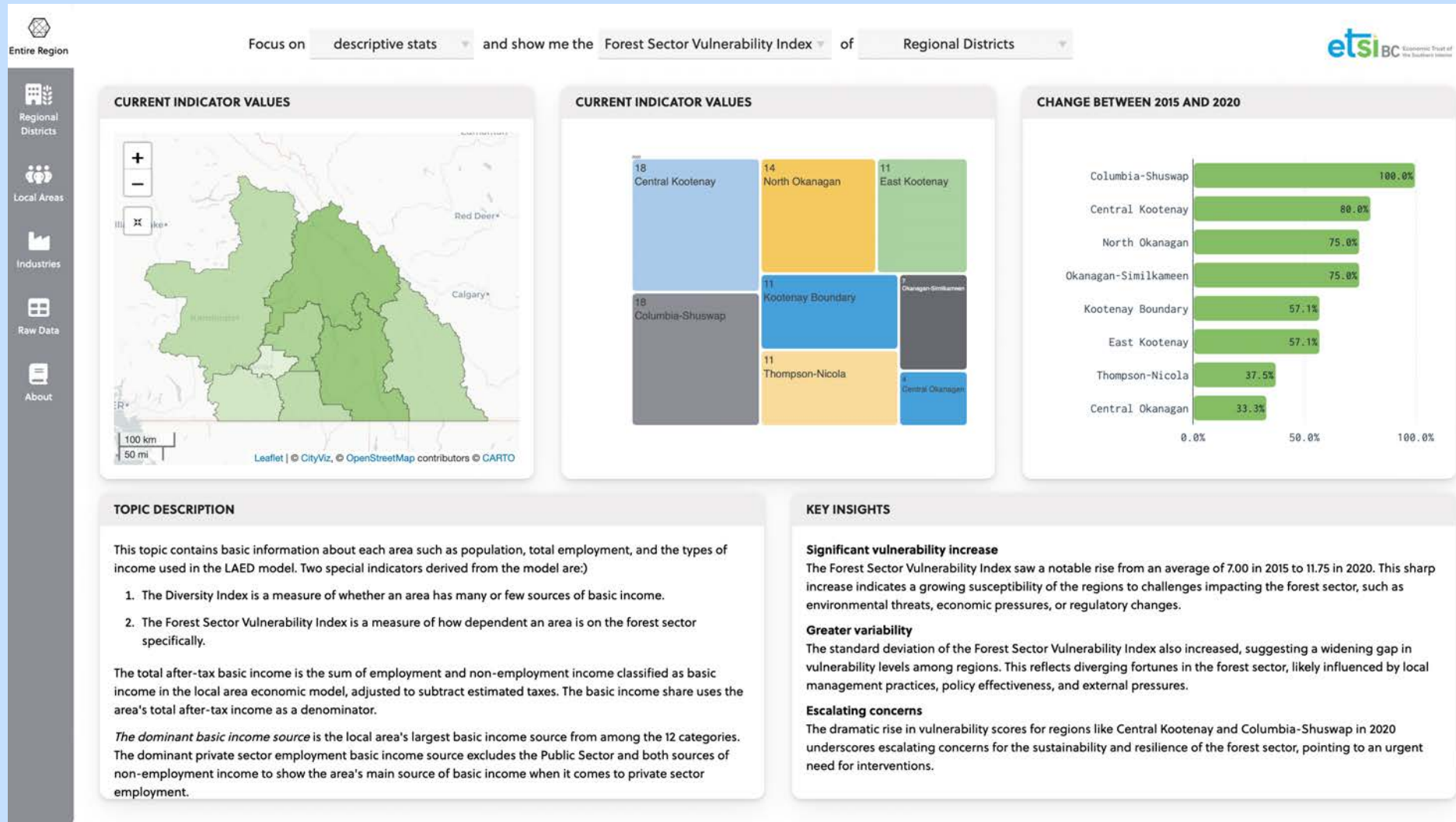
Income Band	BEFORE TAX (%)	AFTER TAX (%)
\$150k+	16.5	10.0
\$125k - \$150k	10.0	8.0
\$100k - \$125k	12.5	13.0
\$90k - \$100k	7.0	6.5
\$80k - \$90k	7.0	7.0
\$70k - \$80k	8.0	8.0
\$60k - \$70k	8.0	8.0
\$50k - \$60k	8.0	8.0
\$45k - \$50k	5.0	5.0
\$40k - \$45k	5.0	5.0
\$35k - \$40k	4.0	4.0
\$30k - \$35k	4.0	4.0
\$25k - \$30k	4.0	4.0
\$20k - \$25k	4.0	4.0
\$15k - \$20k	2.0	2.0
\$10k - \$15k	1.0	1.0
\$5k - \$10k	1.0	1.0
Under \$5k	1.0	1.0

Data source: Statistics Canada, Census 2021

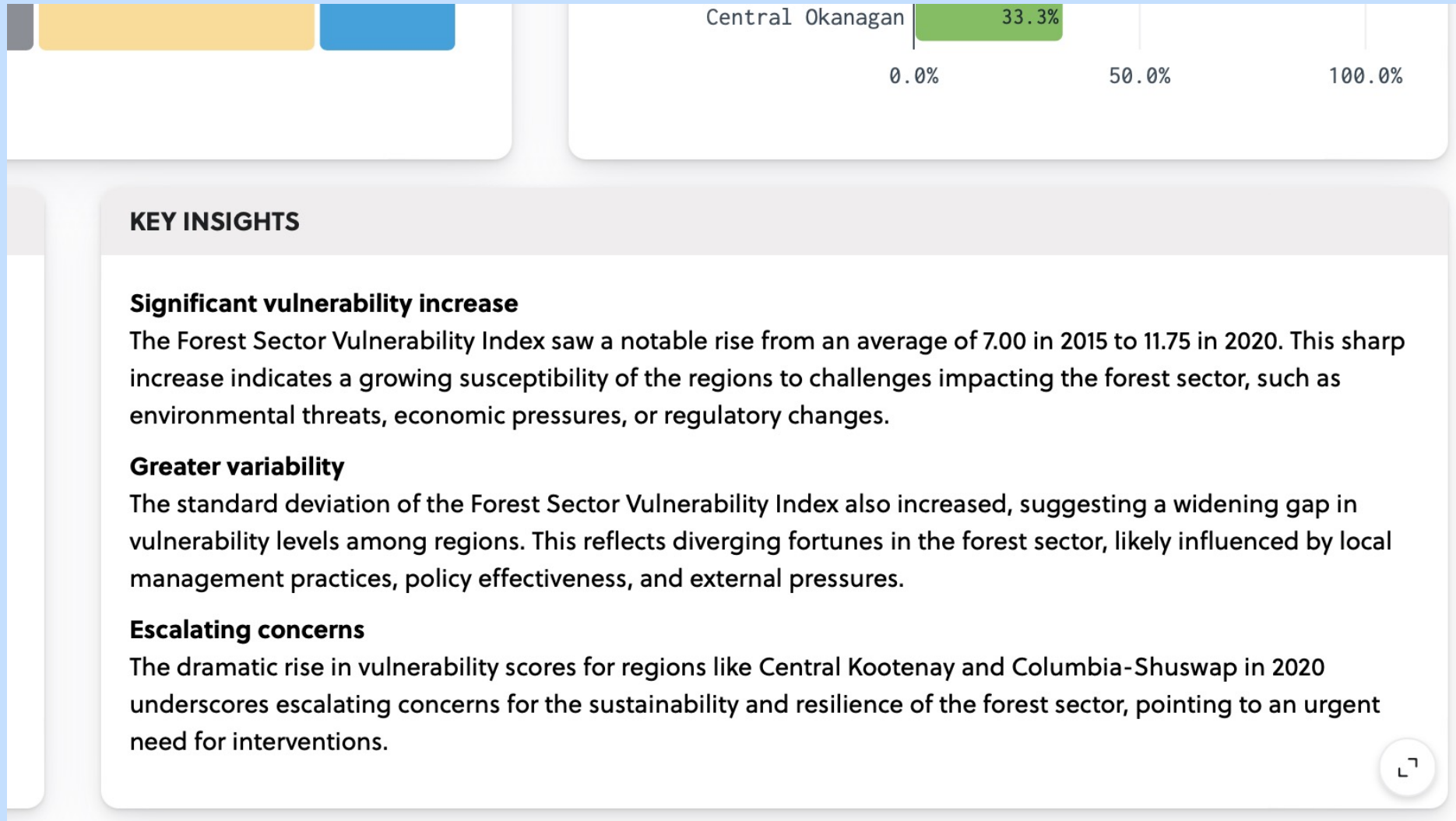
Bellaville

Click to add notes

Local and Regional Economic profile



AI-powered Key Insights



Other AI applications for Economic Development

Content generation

- Images
- Text
- Video & audio

Chat with PDF

- Get instant summaries from any PDF file (strategic plans, OCP, bylaws,...)

CityViz Data Sources

Statistics Canada

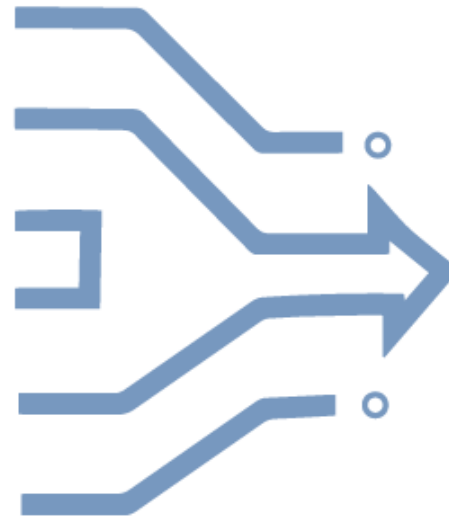
Provincial open data

**Regional & municipal
open data**

CMHC

3rd party data sources
(Spacelist, Telus, Moneris)

Custom data
(building permits, business licences)



Dimensions of CityViz

**Comprehensive
data portal**



Marketing widgets



Productivity tools

- Build custom PDF reports and PowerPoint presentations
- Lead generation
- Admin reports



SEDA 2024 Special: CityViz data platform FREE trial

Book a demo till the end of June 2024 and get
one-month free CityViz full suite of tools
for your community.



Contact:

Sasha Bogdanovic

sasha@cityviz.ca

(250) 317-5636

www.cityviz.ca

In a good company

