1. DEMOGRAPHICS & WORKFORCE

- Black Canadians make up about 4.3% of the total population (in 2021), but only about 2.6% of people work in tech jobs.
- Visible minorities make up 31% of all workers, but 44% of tech workers. However, Black Canadians earn the lowest salary among visible minorities in tech—about $78,800 compared to $93,000 for non-minorities.
- In Alberta (2021), Black people are 3.4% of the working-age population, but only 2.8% work in tech and just 2.0% hold tech management jobs.

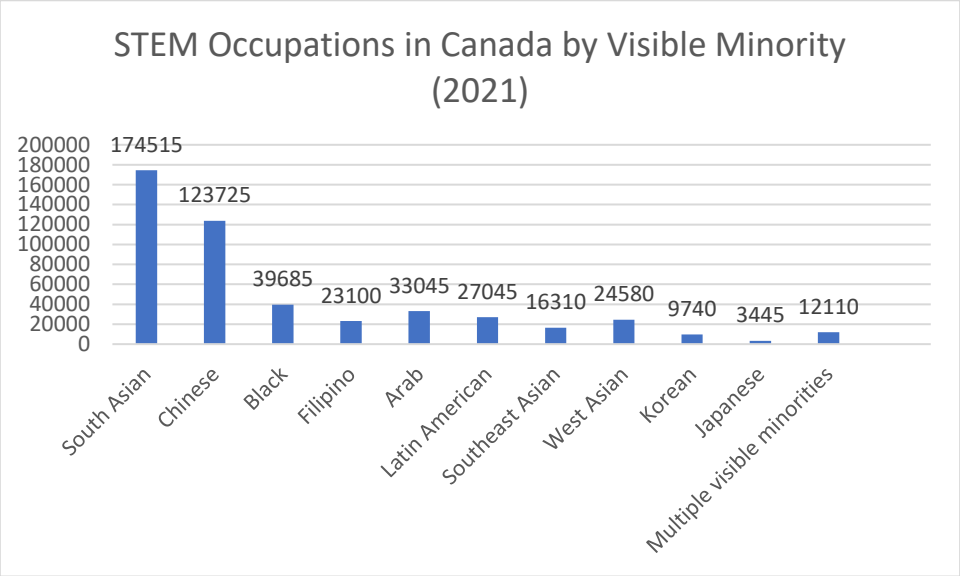

Figure 1.1 shows that while South Asians and Chinese lead STEM roles, Black Canadians represent a small fraction.

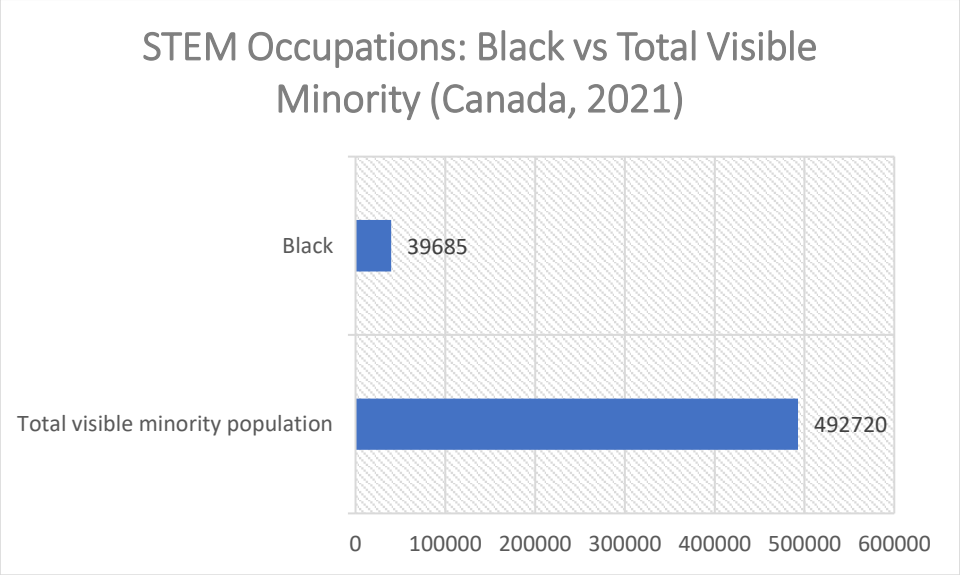

Figure 1.2 illustrates that only 8% of visible minority STEM roles are held by Black Canadians.

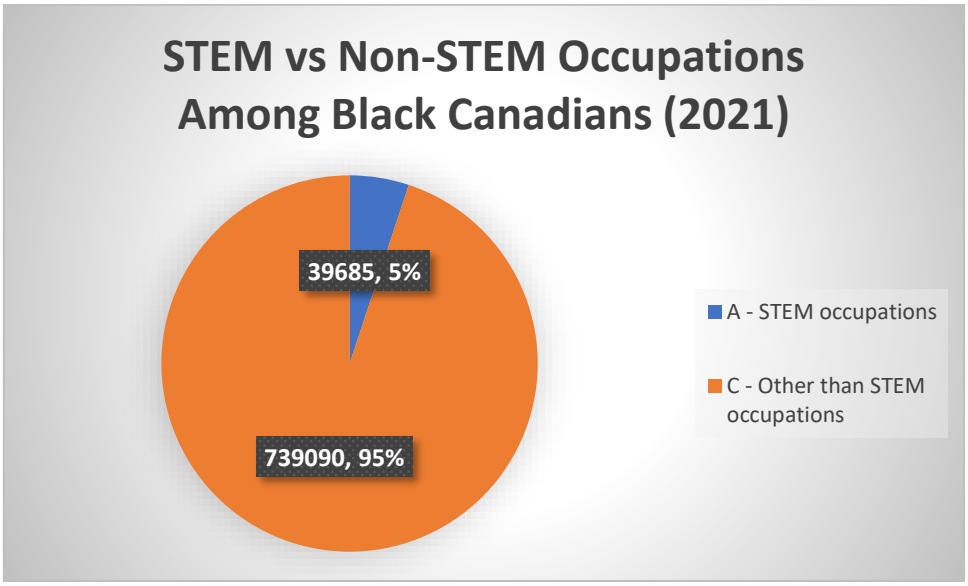

Figure 1.3 shows that 95% of Black workers are in non-STEM fields.

The above visualizations provide insight into the representation of Black Canadians in STEM occupations, based on 2021 Statistics Canada data.

Figure 1.1 ("STEM by Minority") displays the number of individuals from each visible minority group employed in STEM roles. South Asian and Chinese populations have the highest STEM representation, with 174,515 and 123,725 individuals respectively. In contrast, only **39,685 Black Canadians** are employed in STEM occupations—highlighting a significant underrepresentation.

Figure 1.2 ("Black vs Total VM") compares the number of Black Canadians in STEM to the total visible minority STEM population (492,720). The data shows that Black individuals represent just **8% of all visible minority STEM workers**, underscoring racial disparities in tech-driven fields.

Figure 1.3 ("Black STEM Split") further reveals that among Black workers, **only 5% are in STEM roles**, while the remaining **95% are in non-STEM occupations**. This suggests structural barriers or pipeline gaps that limit access to science and technology careers within the Black community.

Together, these findings support the need for targeted policy interventions, inclusive hiring, and STEM-focused educational support programs for Black Canadians.

2. EDUCATION PIPELINE

Key Education Statistics (Canada)

- Racialized students made up 33% of new postsecondary enrollments in 2020/21, up from 30% in 2015/16.
- Black Canadians represent:
  - 6% of university students
  - 7% of college students

    (Sources: oyaop.com, Higher Education Strategy Associates, Toronto Metropolitan University)

Scholarships & Fellowships Supporting Black Students in STEM/AI

- Black Youth AI Fellowship: An 8-week free virtual program for Black university students across Canada to build AI skills.
- Deloitte Black Student Scholarship: Offers financial support and work placements for Black postsecondary students.
- IBET PhD Fellowship: Provides $30,000/year for 4 years to Black and Indigenous students pursuing Engineering PhDs at 18 Canadian universities.

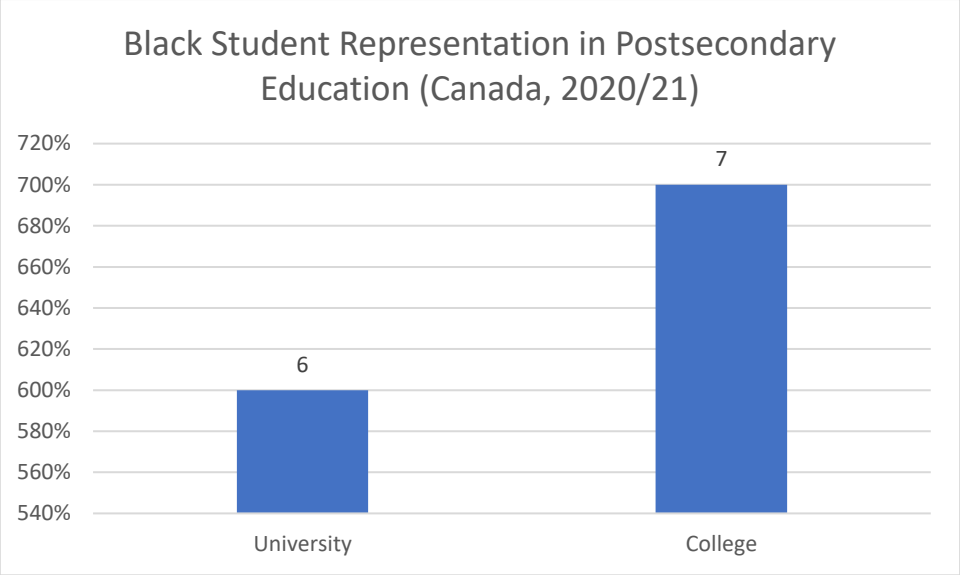

Figure 2: Black student enrollment rates in Canadian postsecondary education show 6% representation in universities and 7% in colleges as of 2020/21.

These education pipeline insights show that while Black enrollment is improving, continued support through dedicated programs and financial aid is essential to strengthen long-term representation in AI and STEM careers.

3. ECONOMIC IMPACT & JOB DISPLACEMENT

AI Exposure & Automation Risk

- About 60% of jobs in Canada (around 4.2 million workers) are at risk of being transformed by AI and automation.
- Jobs in professional, scientific, and tech services are among the most impacted.

Wage & Earnings Gaps

- Canadian-born Black men earn only 76 cents for every $1 earned by non-racialized workers, even with high levels of education.

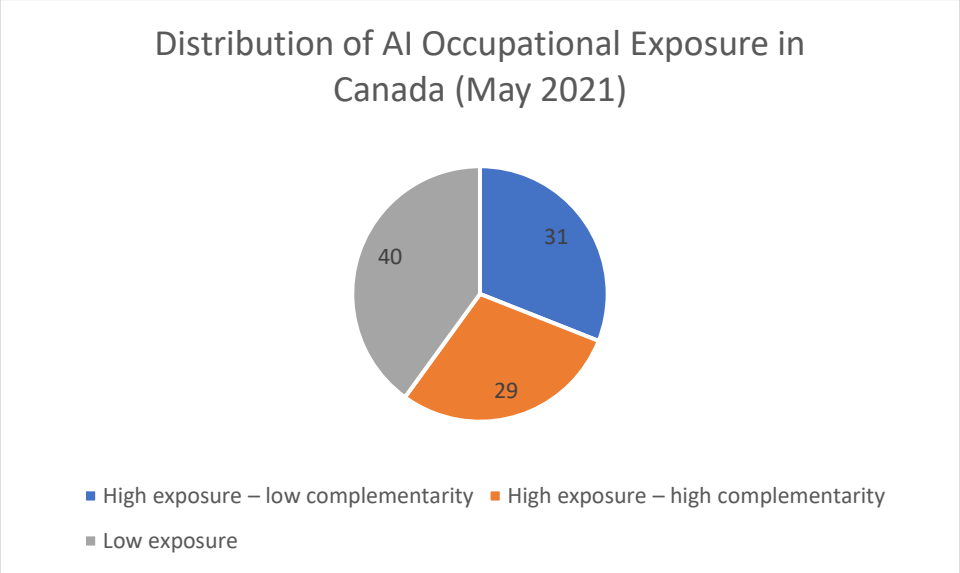

Figure 3.1: Distribution of Canadian workers by AI occupational exposure as of May 2021. While 60% of workers are in high-exposure roles, only 29% are in jobs with high complementarity to AI. This indicates potential displacement risk for over 30% of workers in vulnerable roles.

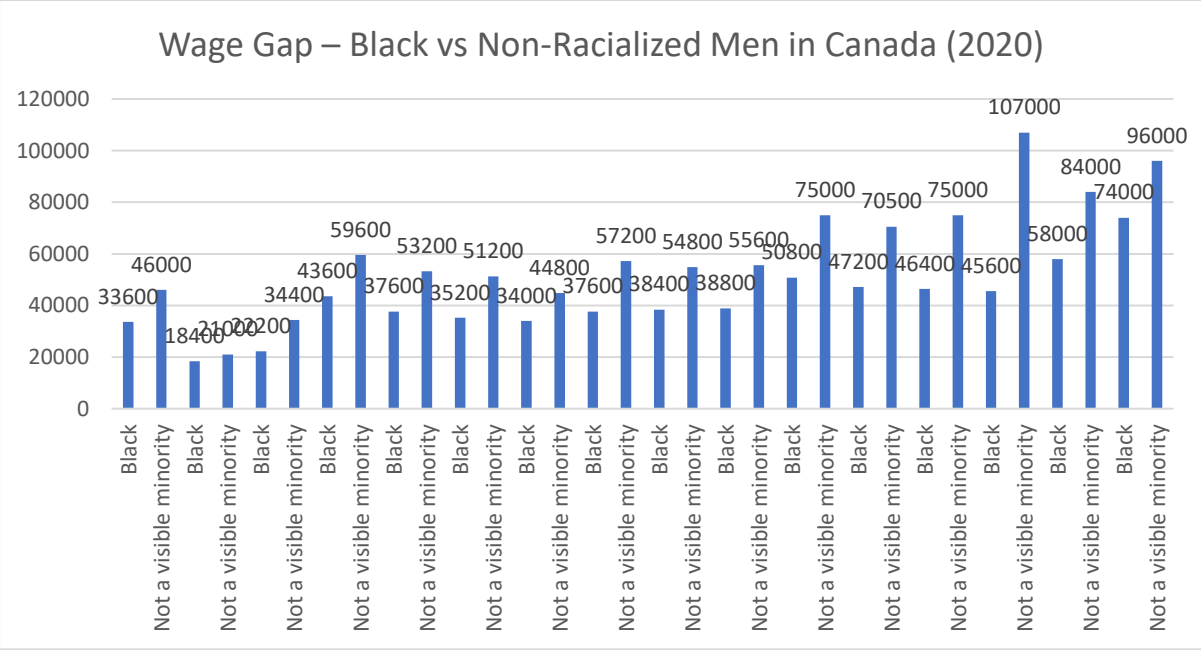

Figure 3.2 presents the median employment income for Black and non-visible minority men across multiple categories. While values vary by job type and demographic group, the data consistently shows a wage gap where Black men earn less. For example, in one comparison, Black men earned $46,400 compared to $58,000 for non-visible minority men — a gap of roughly 20–24%.

4. RESEARCH, FUNDING & POLICY PARTICIPATION

Grants & Research Programs

- The IBET PhD Fellowship includes paid Mitacs internships, supporting Black and Indigenous students in engineering research across Canada.
- NSERC's Chair for Inclusion in Science & Engineering provides targeted support to racialized researchers, including African Nova Scotians.

Board & Policy Representation

- Black Canadians hold 3.8% of board positions, slightly below their population share (4.2%).
- Senior leadership roles are even lower, with only 2.6% of senior managers identifying as Black.

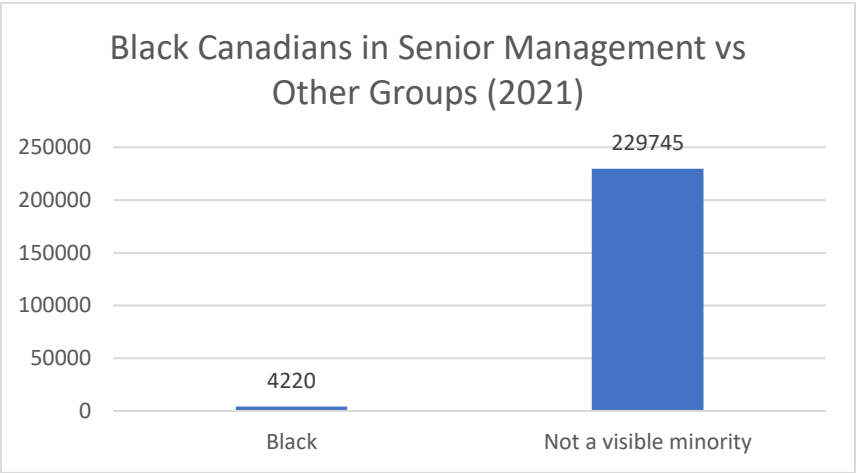

Figure 4.1 – Black Canadians in Senior Management vs Other Groups (2021)

The chart above compares the number of Black Canadians versus non-visible minorities employed in senior management roles in 2021, based on data from Statistics Canada's National Occupational Classification (NOC) 2021.

Black Canadians held just 4,220 senior management positions, compared to **229,745 among non-visible minorities**. This stark disparity highlights the persistent underrepresentation of Black professionals in leadership roles, despite representing approximately **4.2% of Canada's population**.

This underrepresentation is especially significant when considered alongside findings from previous sections. While Black Canadians are entering postsecondary programs and STEM-related fields in growing numbers, structural barriers appear to limit upward mobility into high-level decision-making positions.

5. ALGORITHMIC BIAS & SOCIAL IMPACT

Documented Biases

- While no official Canada-wide stats exist, global research highlights serious bias in AI systems—especially in facial recognition and automated hiring tools, which have disproportionately misidentified or excluded Black individuals.
- These global patterns suggest the importance of local scrutiny and protective policy in Canada.

Perceptions of AI Among Black Canadians

- A 2024 survey shows that 64% of Black Canadians who use Generative AI are:
    - Early adopters, but also
    - More concerned about racial bias in AI systems, compared to just 36% of non-users who share those concerns.

Underrepresentation in Tech

- Black Canadians make up only 2.6% of the country's tech workforce, despite being 4.3% of the overall population.

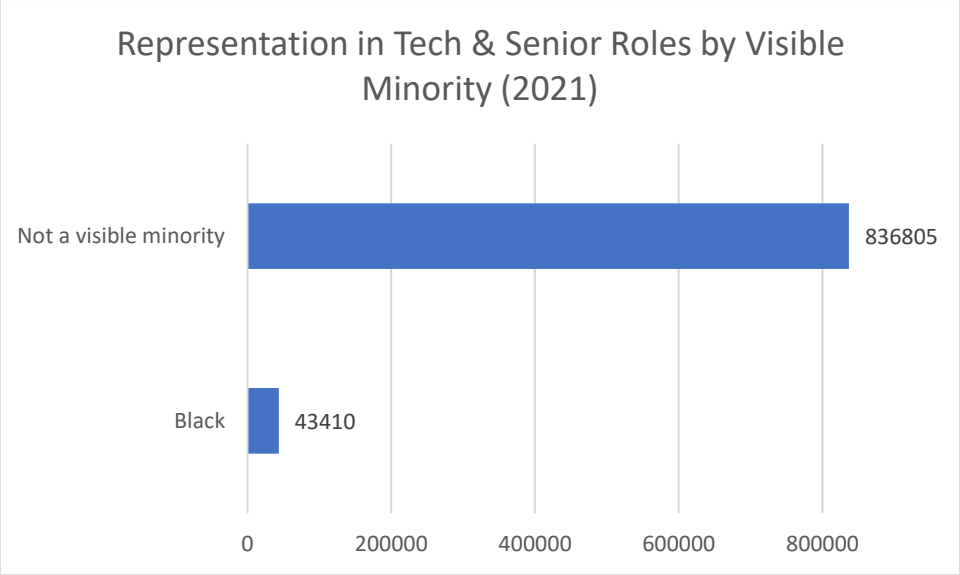

Figure 5.1: Total number of Black vs Non-visible minority workers in senior and tech roles (2021). Black Canadians remain significantly underrepresented despite making up 4.3% of the national population.

6. INCLUSION INITIATIVES & BARRIERS

Programs & Participation

- Black in Robotics offers Legacy Fellowships to support Black students and postdocs in robotics research and innovation.
- The Black in Technology Foundation provides scholarships, skills training, and career placement for Black professionals entering or advancing in tech.
- CultureLink's AI program delivers AI education and mentorship for Black and Indigenous youth in Canada.

Attrition & Advancement

- There is no direct data on attrition or advancement rates for Black professionals in AI/tech—this represents a key research gap.
- However, the low representation in senior leadership roles (only 2.6%) suggests challenges in career progression.

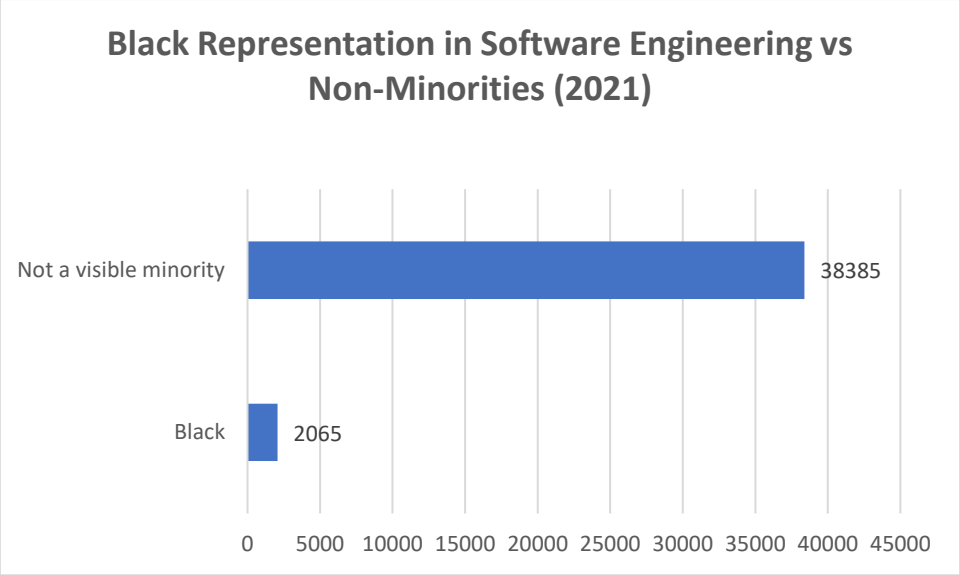

Figure 6.1 presents the number of individuals working as software engineers and designers in 2021, disaggregated by visible minority status. Out of more than 40,000 professionals in this occupation, only 2,065 were Black Canadians, compared to 38,385 who were not part of a visible minority. This stark underrepresentation highlights the ongoing racial disparities in high-skilled tech roles, despite broader efforts to diversify the industry. Addressing these gaps requires equitable hiring practices, mentorship programs, and inclusive workplace cultures tailored to support Black professionals in STEM.