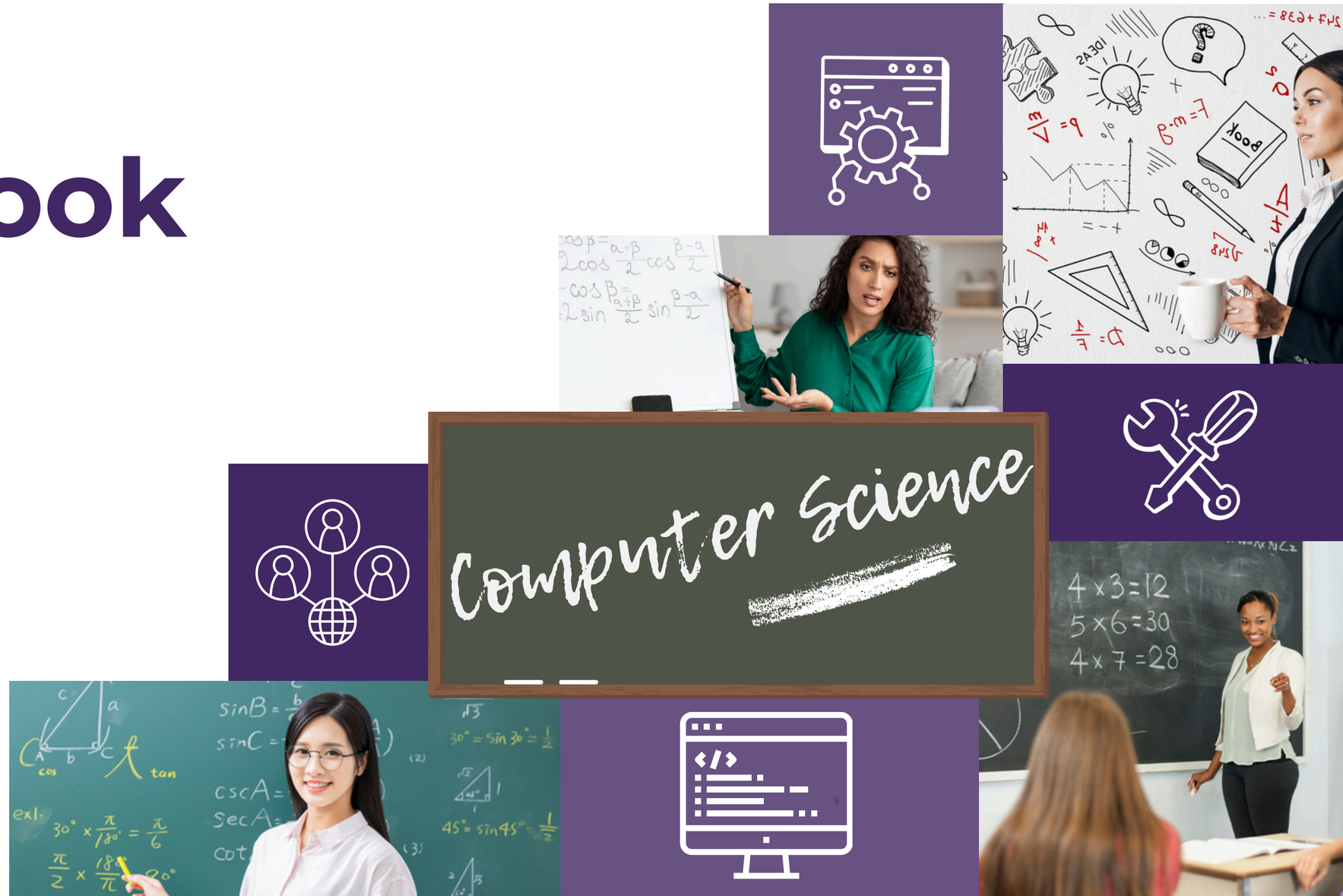
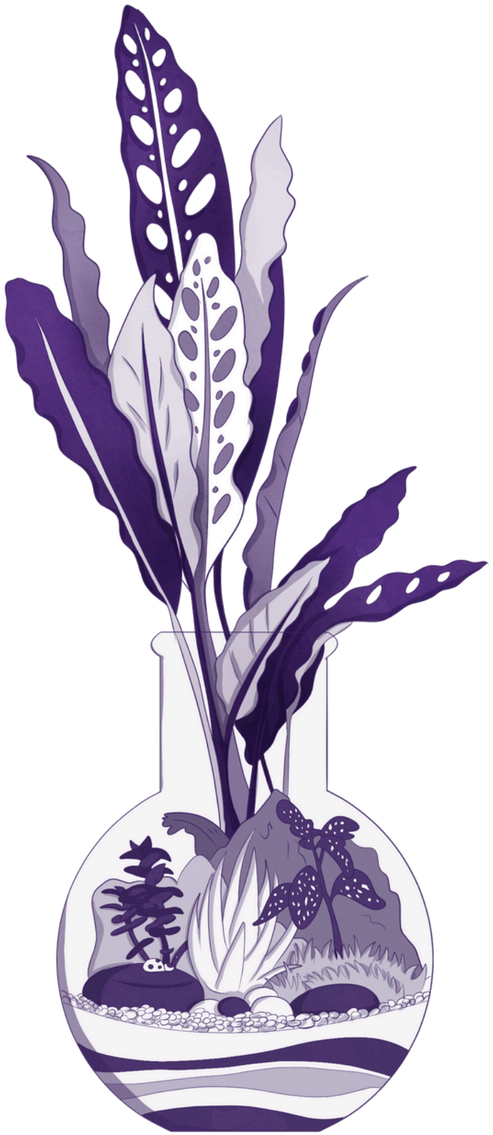
Parité
SCIENCES

Career Guidebook





Mathematics

M

Physics

P

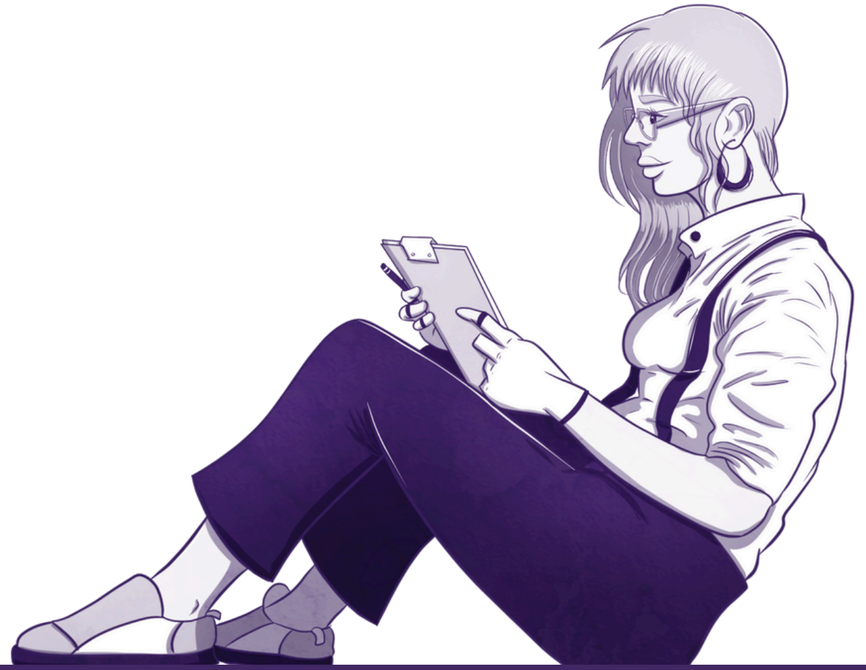
Computer Science

CS

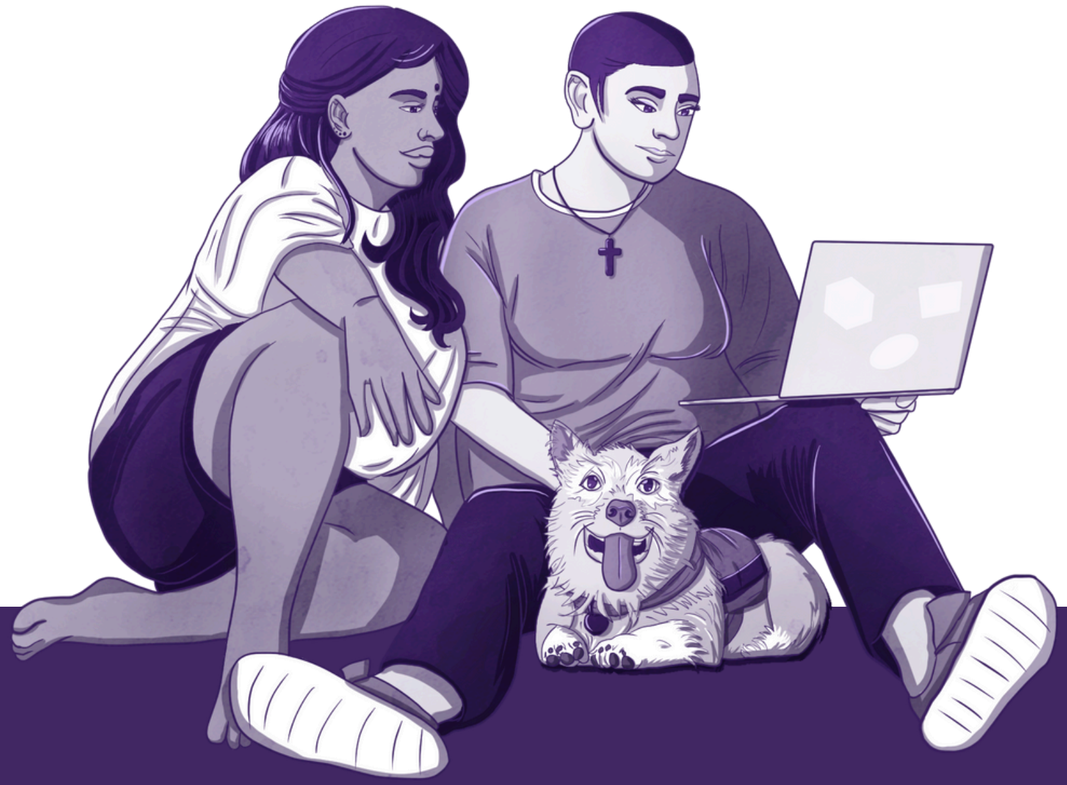
Education and Careers in Computer Science

The code that opens the door to stimulating projects and challenges

Guide Content



01 Profile of a Computer Scientist



A Computer Scientist

Is

- Curious
- Versatile
- Ressourceful
- Creative

Like

- Problem-solving
- Collaborative teamwork
- To communicate

Has

- Organizational skills
- Critical thinking

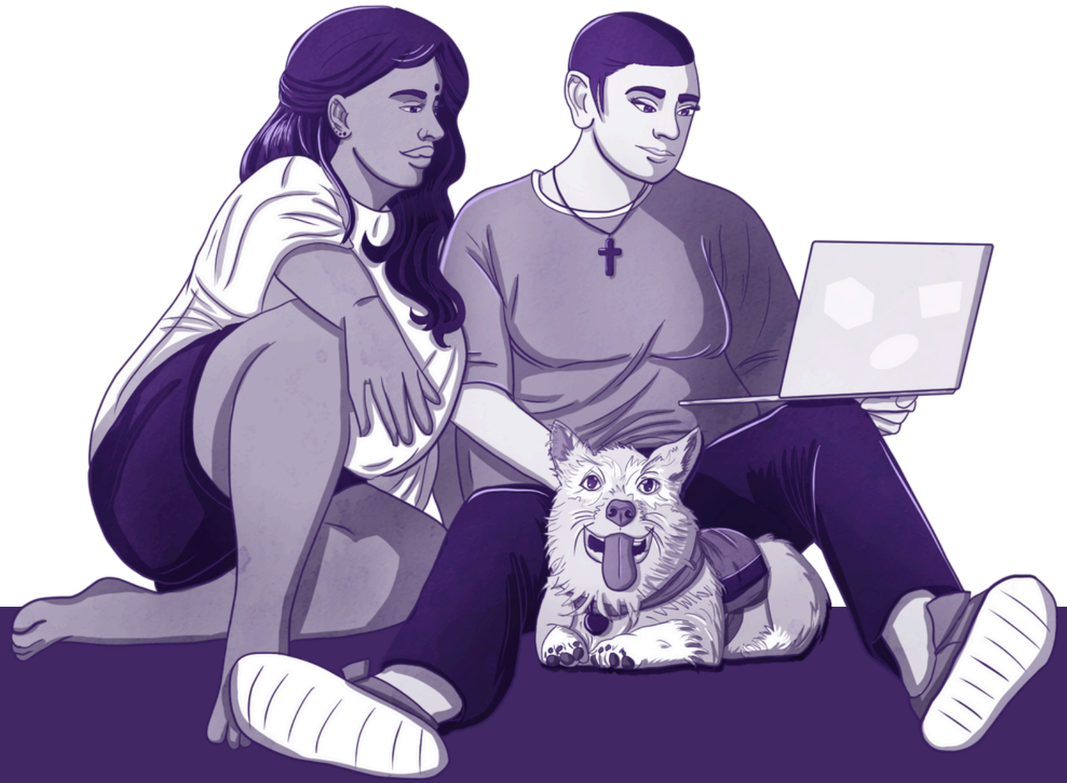
Can

- Work efficiently
- Be independent

* Source : Gouvernement du Canada (2020); Université Laval (service de placement)

02 Training

Career Trajectories



Pre-University Programs

Lead to a Diploma of College Studies (DEC)

Natural Sciences

Duration: 2 years
Specific training: biology, chemistry, mathematics (differential and integral calculus, linear algebra and vector geometry), physics

Computer Science and Mathematics

Duration: 2 years
Specific training:
chemistry, computer science, mathematics (differential and integral calculus, linear algebra and vector geometry, discrete mathematics), physics

Computer Science Technology

Lead to a Diploma of College Studies (DEC)

Duration: 3 years
Credits : 90

Specific training: programming, interfaces and web development, introduction to databases, networks and IT support, security, software design and quality, mathematics

Bachelor of Computer Science

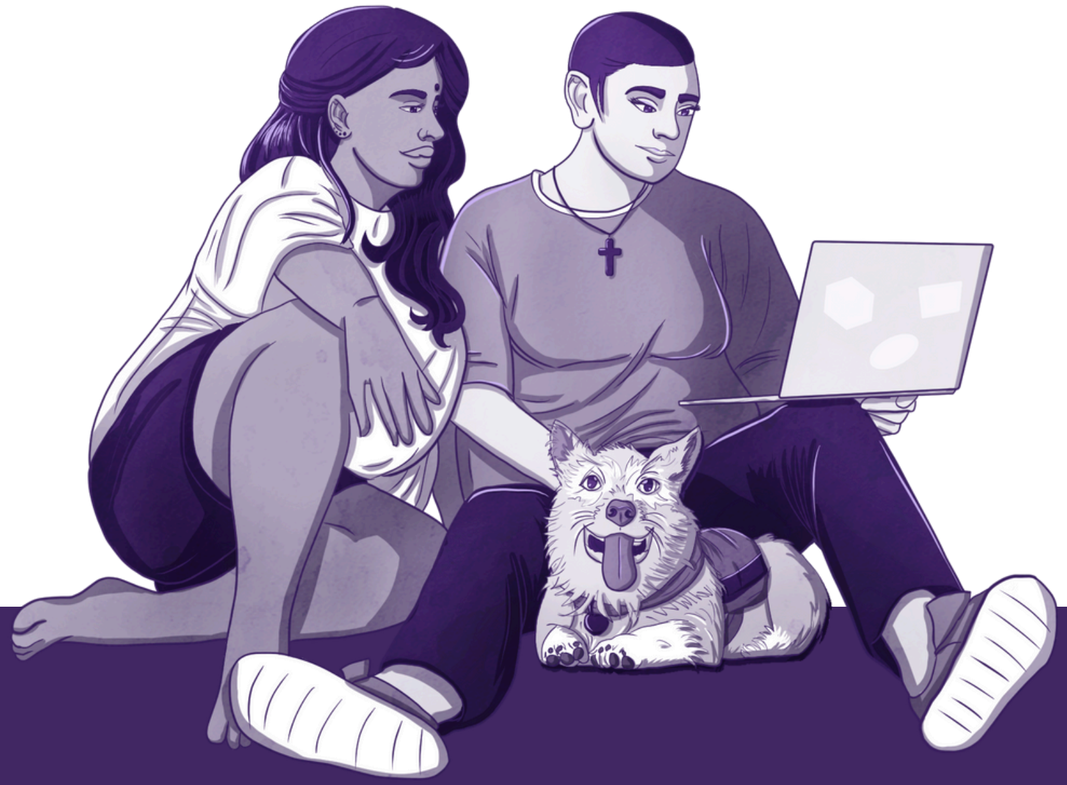
First Cycle

Duration: 3 years
Credits: 90

Minimum R-score varies by university
Mandatory courses: programming, discrete structures in computer science, operations research models, data structures, introduction to theoretical computer science, algorithms, computer systems, linear algebra, calculus, probability and statistics

03 Career Fields

Computer scientists can have different positions or titles



* Source : Fiches carrières en sciences de la nature du Cégep Limoilou

Job Titles

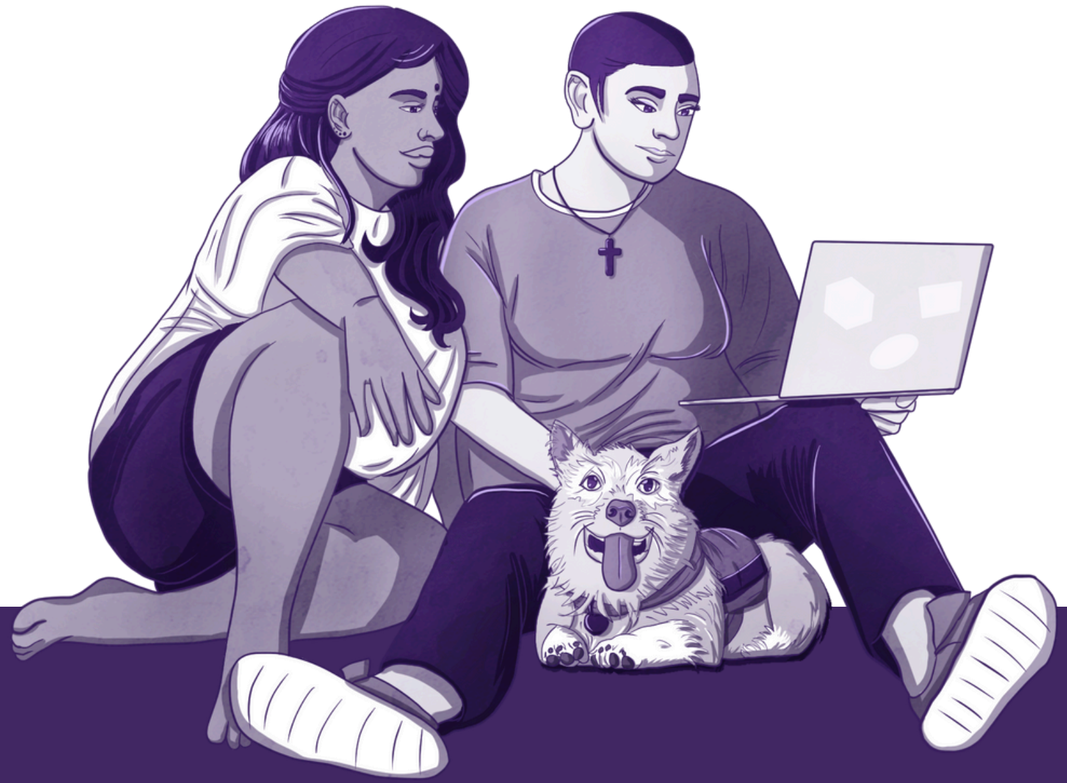
- Network administrator
- System administrator
- Computer analyst
- Network architect
- Software designer
- Network designer (e.g., computer, fibre optic)
- Systems designer
- Computer consultant
- Chief technology officer
- Chief executive officer (CEO)
- Programmer
- Modelling specialist
- Vice president of research and development

Examples of Employers

- Consulting firms
- Manufacturing industries
- Video game sectors
- IT and communications equipment manufacturers
- Parastatal industries
- High-Tech companies
- Finance/economic sectors
- Companies specializing in IT services and software development
- Research centres
- College and universities
- Federal and provincial governments

04 Testimonials

Profile of Professionals



Tania Kim-Lan Joly

Technological Solutions Designer (Architect)

Société de transport de Montréal (STM)

Master's degree in compter science, Université du Québec à Montréal
Federal Baccalaureat Switzerland, Collège Voltaire

"I design and model technological solutions to incorporate them into the STM's existing systems. I analyze the business sector's needs along with several colleagues assigned to other IT areas, such as security, networking, infrastructure and application software."

"I love working with my colleagues to find the perfect solution to meet our needs and particularly those of our users."

A challenge is to "reconcile innovation and potential impacts for the benefit of an organization that plays a major role for Montreal's residents and visitors."

Keith Beaudoin

Product Manager

OVA

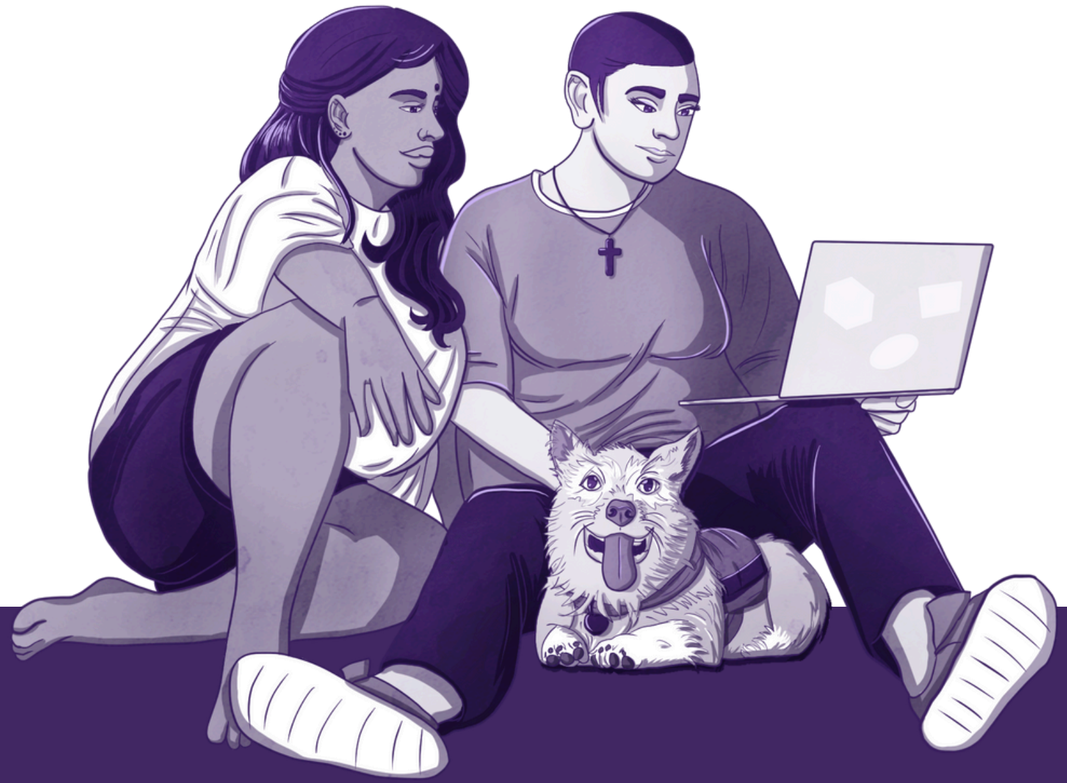
Bachelor's degree in compter science, Université du Québec à Trois-Rivières
DEC-BAC in compter science, Cégep Garneau

"My work enables me to increase human capacity and understanding thanks to the development of applications based on immersive technologies like virtual reality, augmented reality and mixed reality. These technologies are also supported by artificial intelligence."

"I love experimenting with cutting-edge technologies. I also feel like I'm helping immersive technologies to grow and become more accessible."

A challenge is to "Work in an innovative field that is in its infancy. Everything still has to be built and defined!"

05 Remuneration



Annual Salary

Computer engineering

$ 53,000 -

$ 119,000

average per year

Computer science technology

$ 34,000 -

$ 96,000

average per year

* Source : Emploi-Québec (2015); Gouvernement du Canada (2020); Université Laval (service de placement)

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