



Northeastern University
Vancouver

About **Northeastern**

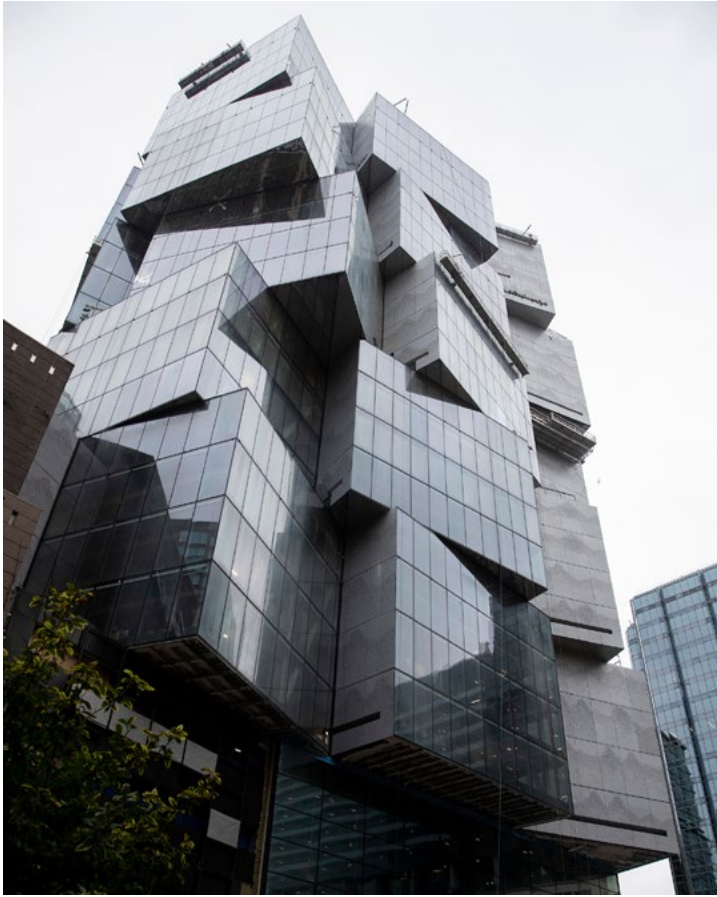
Founded in 1898, Northeastern is a global research university and the recognized leader in experiential lifelong learning.

Our approach of integrating real-world experience with education, research, and innovation empowers our students, faculty, alumni, and partners to create worldwide impact.

Northeastern's comprehensive undergraduate and graduate programs lead to degrees through the doctorate in nine colleges and schools across our global system of campuses. Learning is personalized and experiential, with a curriculum that emphasizes the intersection of data, technology, and human literacies—uniquely preparing graduates for lives of fulfillment and accomplishment.

Our research enterprise, with an R1 Carnegie classification, is solutions-oriented and spans the world. Our faculty scholars work in teams that cross not just disciplines, but also sectors—aligned around today's highly interconnected global challenges and focused on transformative impact for humankind.





Northeastern's new Vancouver campus location at 410 West Georgia in the heart of downtown Vancouver.

Vancouver Campus

Graduate learning and research to power Canada's tech and innovation economy.

Northeastern in Vancouver offers graduate programming designed to meet the urgent and emerging talent needs of industry in BC, and the rapidly evolving regional, national, and global

economy. Learners are encouraged to pursue real-world experience through co-ops, and industry-immersed projects and research initiatives.

Tailored to the region's needs as a tech and innovation hub, master's programs in Vancouver include computer science, analytics, data engineering, information design and data visualization.

Leverage Northeastern's growing global network

Experience the advantages of our worldwide reach.

12

Campus Locations

275,000

Alumni in 177 countries

17,000

Graduate Students globally

3,300

Employer partners worldwide

The Vancouver campus is one of Northeastern's twelve campus locations. Fully integrated and locally informed, our network provides our community and partners unique opportunities across a vast range of geographic, economic and cultural contexts. Aligning workforce education and research with regional economic needs, our campuses and research hubs serve as an integrated platform for scaling ideas, talent, and solutions, leading to richer collaboration with our partners worldwide.



Graduate Programs in Vancouver

Master of Science in Computer Science
(+ Align pathway - Master of Science in
Computer Science)

**Master of Science in Data Analytics
Engineering***

**Master of Professional Studies in
Analytics***

**Master of Science in Information
Design and Data Visualization***

** Starting Fall 2022*





Master of Science in Computer Science

The MS in Computer Science program helps students and professionals build skills in designing and maintaining large application software, and researching cutting edge technologies.

Core courses explore program design, algorithm evaluation, and software development. Breadth areas include Systems and Software, Theory and Security, and Artificial Intelligence and Data Science.



At the end of the program, students are able to:

- Apply algorithmic and theoretical computer science principles to real-world software projects in a variety of application domains.
- Recognize and solve problems in the field of computer science
- Work effectively in interdisciplinary teams
- Design, develop, and test software and applications in emerging computer science areas such as artificial intelligence, machine learning, and mixed reality.

Breadth areas:

Systems and software

With courses providing an understanding in the basic components of programming languages, to theoretical issues related to wireless networking, this breadth area builds on the use of software to solve practical problems. Students gain broad experiences and knowledge in software engineering processes, system-level programming, and programming languages.

Courses include:

- Foundations of Software Engineering
- Principles of Programming Languages
- Mobile Application Development
- Computer Systems
- Web Development
- Building Scalable Distributed Systems

Theory and Security

Discovering how security can be made synergistic in system design, this breadth area helps students gain a strong foundation in the theory of computation and systems security issues. By taking courses focused on security vulnerabilities in software, privacy, and cryptography, students will better understand the pervasiveness of security in computer science.

Courses include:

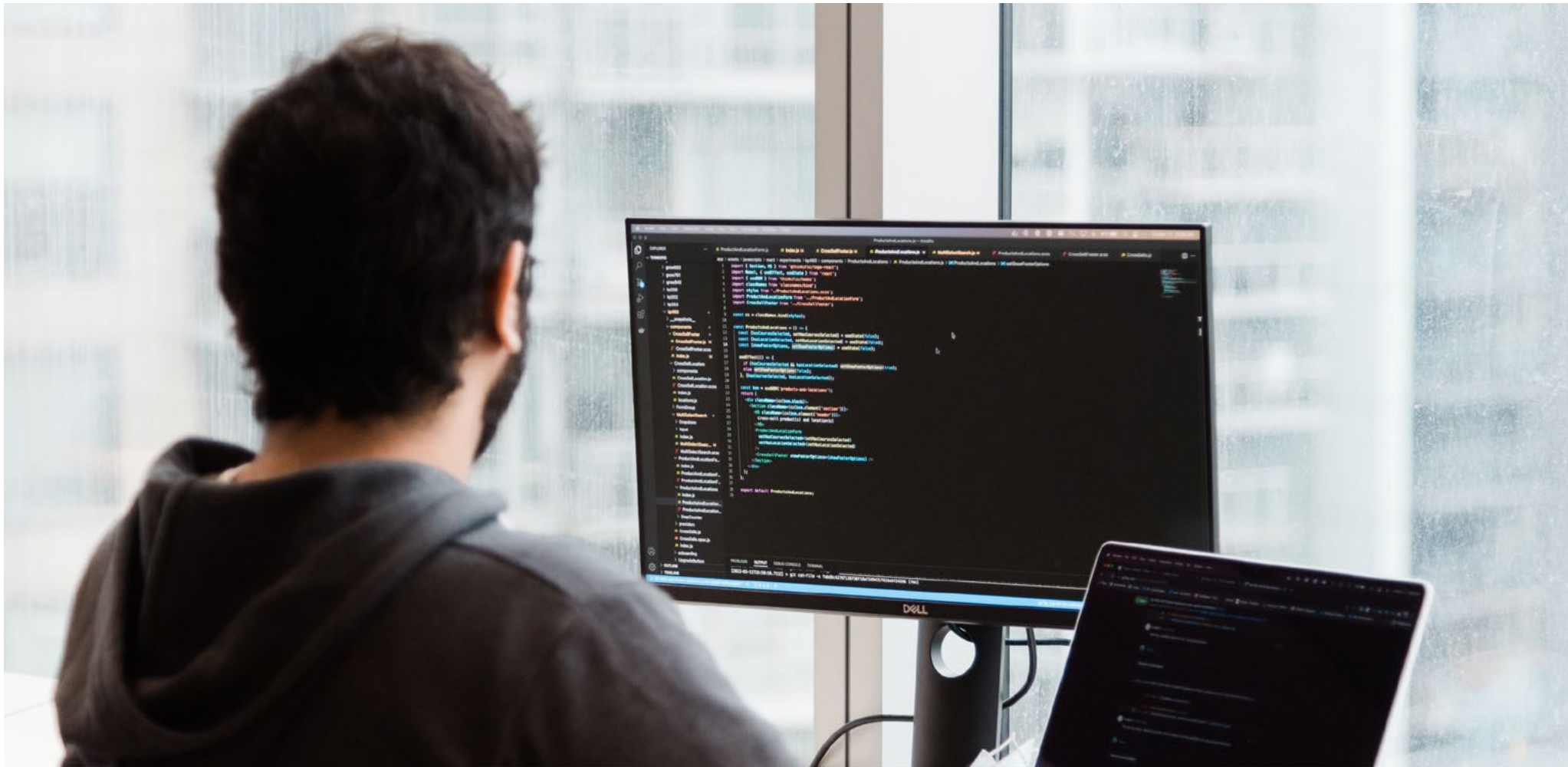
- Privacy, Security, and Usability
- Software Vulnerabilities and Security
- Network Security

Artificial Intelligence and Data Science

This breadth area introduces students to the fundamental problems, theories, and algorithms of artificial intelligence, while presenting techniques in machine learning and data mining. Students can take courses focused on collection of data, gathering information from data for a variety of applications including games and natural language processing.

Courses include:

- Foundations of Artificial Intelligence
- Database Management Systems
- Machine Learning



Align pathway - Master of Science in Computer Science

The Align program pathway leading to a Master of Science in Computer Science helps learners transition into computer science, regardless of prior background or bachelor's degree.

Align bridge courses include:

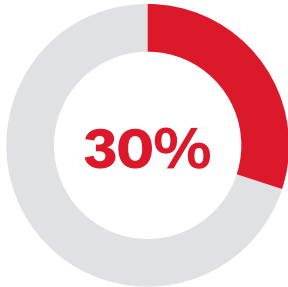
- Intensive Foundations of Computer Science
- Discrete Structures
- Object Oriented Design
- Data Structures, Algorithms, and their applications within Computer Systems

Diversity of learners

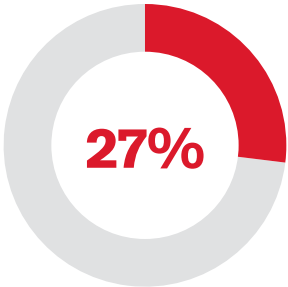
Undergraduate background

Students in the Align MS in Computer Science program represent more than 100 undergraduate areas of study.

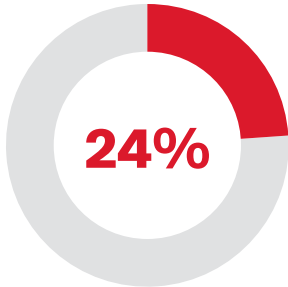
Bringing together more than 100 undergraduate areas of study



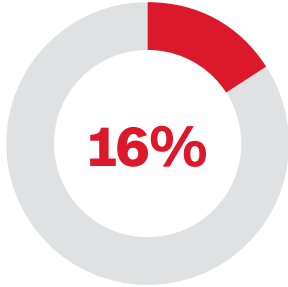
Sciences



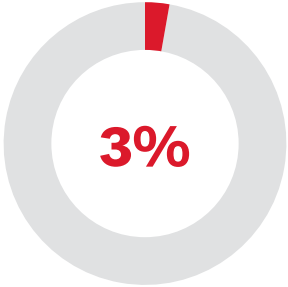
Humanities



Business



Engineering



Fine and Performing Arts

49%

of Align MS in Computer Science students at Northeastern’s campus in Vancouver identify as women or non-binary.*

Compared to North American average of less than 25%

Partner with us

Our partnerships are infinitely flexible in scope and scale—and customized to serve your business goals.





Northeastern student co-ops
and full-time placements in
BC since 2021

Create a **talent pipeline**

Our experiential learning model at Northeastern makes it easy to audition and recruit skilled professionals.

Co-ops and full-time placements

Join over 3,300 employers in 140 countries, including SAP, Microsoft, Amazon, RBC, Providence Health and more in adding a Northeastern co-op student to your team.

Whether you need support for four months, six months, eight months or more, our flexible options ensure you hire the right graduate student, for the right time frame. And we'll work with you to recruit and support the placement every step of the way.



NRC · CMRC



ORACLE
Labs

Project and Research Expertise:

- *Artificial Intelligence*
- *Machine Learning*
- *Deep Learning*
- *Virtual and Augmented Reality*
- *Big Data Analytics*
- *Data Science*
- *Computer Vision*
- *Cognitive Networking*
- *Data Analysis*
- *Cognitive Neuroscience*
- *Health Informatics*
- *Speech Recognition*
- *Natural Language Processing*
- *Indigenous Language Revitalization*
- *Scalable System Infrastructure*
- *Scheduling Optimization*

Experiential Network (XN) and Industry projects

Through our Experiential Network program, you can assign six- to fifteen-week projects, with students working towards an actionable deliverable that provides insight and recommendations to inform critical business decisions.

It's a win-win: You get valuable project deliverables and a chance to audition talent. Students get resume-building experiences. Projects are done with oversight from Northeastern's faculty experts.

Capstones

Need more in-depth research support?

A capstone is an end-of-program applied research project where students spend twenty hours per week, for thirteen weeks investigating a research problem alongside an industry stakeholder.

Depending on the problem, the project scope will include a literature review of related work, identification of methodologies to solve the problem, an exploratory set of experiments with results, along with a final analysis and future work. Students can work individually or in teams of two or three. Stakeholders can meet with students virtually or in person, typically every two weeks, or as often as is required for the project.



“Northeastern co-op students have been incredibly well-prepared and equipped with successfully jumping into the industry field. They possess all the skills and knowledge for passing our interviews on a consistent basis. We also love working with NEU’s Align program as they offer a high caliber of culturally and intellectually diverse students. This has been a fantastic partnership for Meta to help us bring the world closer together and build the metaverse.”

Bernice Au

Emerging Talent Recruiting, Meta

How your organization benefits:

- Receive insights from students who bring a fresh perspective to your organization
- Assess and engage rising student talent through project-based work
- Give new and rising managers opportunities to mentor and develop high-potential students

Other ways to engage with Northeastern in Vancouver:

Develop and retain talent

We’ll work with you to understand your organization’s unique needs, then co-design learning programs that fill skills gaps in technology and innovation.

Collaborate on research

Research is the engine of progress. By identifying and harnessing artificial intelligence and other emerging technologies, let us help you innovate and propel your business forward.

Have questions?

Connect with our Director of Strategic Partnerships at Northeastern in Vancouver, Dominik Beckers d.beckers@northeastern.edu