Honours Bachelor of Computer Science – Data Analytics

Meet our students

Our students are well-versed in cloud computing, data analytics, game engineering and network engineering. Students specializing in data analytics complete six specialized courses prior to their co-op term (totaling 336 training hours). These courses strike a balance between theory and practical experience allowing students to gain a deep understanding of how to apply statistical analysis, machine learning, data mining and other advanced artificial intelligence techniques to draw new and useful insights from large sets of data.

Learn more about the classes these students take by visiting the program webpage.

Core competencies and skills

- Developing software applications using C#, C++, Java, Swift, Python, JavaScript and more, using industry-grade frameworks and tools.
- Creating advanced web applications that leverage AI, the cloud and SQL and NoSQL databases.
- Determining solutions using problem-solving principles, logic, and systematic methodologies.
- Applying data-driven approaches to address real-world business challenges.
- Developing efficient programs for data manipulation, analytics, and visualization using Python and R languages.
- Developing and using data warehouses for business intelligence and reporting.
- Applying machine learning and statistical techniques to identify meaningful patterns in data and build predictive AI models for business decision support.

Sheridan Works

- Integrating knowledge of ethical and legal frameworks with effective business practices.
- Collaborating when working in software engineering and multidisciplinary teams.
- Communicating professionally, meeting client needs and project due dates.
- Researching new knowledge and technologies within the computer science field.
- Designing and analysis of machine learning algorithms to create intelligent software solutions.
- Creating a data warehouse to support online analytic processing (OLAP) and loading data to the warehouse (ETL) from multiple data sources.
- Designing appropriate multi-dimension data models for different data warehousing needs.

Work term availability

- Students onboard in the summer (May) and can pursue 4–16-month work terms.

Note: Students who secure an 8-month or longer placement may be eligible for tax credit.

Work term capabilities

- Designing, implementing, testing, and deploying software systems for various application domains, as well as secure enterprise-grade information systems.
- Formulating solutions to computational problems using a variety of strategies, including common problem-solving paradigms, ad hoc analysis, and critical thinking.
- Synthesizing principles and theories of computer science and software engineering for application to different computing paradigms.
- Analyzing classification problems to determine which type of classifier is most suited for the task and creating solutions using a machine learning algorithm such as logistic regression or support vector machines.
- Designing effective user interfaces using human-computer interaction principles.

Employer resources

- [Employer webpage](#)
- [Program information](#)
- [Program course schedule](#)

Post a job

To post a job, log in to our online platform **Sheridan Works**.

Don't have an account? Create one today using our **Employer Registration Guide**.

Sheridan Works