SFU
BIG DATA

Fall 2026

APPLIED AI IN DATA ANALYTICS

dial
founded by
SFU BEEDIE
SCHOOL OF BUSINESS

BRIDGE DATA TO AI-DRIVEN INSIGHT

Organizations are overwhelmed by massive volumes of structured and unstructured data—text, images, audio, and more—that traditional analytics tools are struggling to keep up with. The challenge is knowing when, where, and how to leverage AI to quickly turn raw data into actionable insights.

For analysts, researchers, and data professionals, this gap isn't about technical expertise alone—it's about adapting your analytical thinking and reasoning to seamlessly integrate AI into your workflows, without getting lost in complexity or coding-intensive tasks.

Through practical, hands-on learning with accessible no-code and low-code AI tools, the Applied AI in Data Analytics program equips you to transform your data analysis workflows, automate tedious data processing tasks, and position yourself as a leader in data-driven decision-making.

PROGRAM STRUCTURE

The Applied AI in Data Analytics Program is a 10-week program designed to deliver a comprehensive and flexible learning experience. All sessions feature faculty and industry-led content, discussions, case studies, and applied activities to ensure practical understanding and application of artificial intelligence concepts.

ONLINE PEER LEARNING SESSIONS
OCTOBER 6 - DECEMBER 8, 2026

Title	Date	Time
• Week 1: Foundations of AI for Data Analytics	• Tuesday, October 6	• 3:00 - 5:00 PM PT
• Week 2: Explore Data with AI	• Tuesday, October 13	• 3:00 - 4:30 PM PT
• Week 3: Prepare & Transform Data with AI	• Tuesday, October 20	• 3:00 - 4:30 PM PT
• Week 4: Analyze Data With AI	• Tuesday, October 27	• 3:00 - 4:30 PM PT
• Week 5: Build AI Models (No-Code/Low-Code)	• Tuesday, November 3	• 3:00 - 4:30 PM PT
• Week 6: Deploy Models (No-Code/Low-Code)	• Tuesday, November 10	• 3:00 - 4:30 PM PT
• Week 7: Tune Models with AI	• Tuesday, November 17	• 3:00 - 4:30 PM PT
• Week 8: Advanced AI Techniques	• Tuesday, November 24	• 3:00 - 4:30 PM PT
• Week 9: Communicate Insights with AI	• Tuesday, December 1	• 3:00 - 4:30 PM PT
• Week 10: AI in Practice & Next Steps	• Tuesday, December 8	• 3:00 - 5:00 PM PT

**The schedule is being finalized and may be subject to change.*

FLEXIBLE ONLINE LEARNING

10 weeks of on-demand content available through Canvas, allowing you to study at your own pace each week.

TIME COMMITMENT

Recommended 4 to 6 hours per week, making it manageable alongside your professional and personal commitments.

INTERACTIVE LIVE SESSIONS

Opening and Closing 2-hour sessions and weekly 1.5-hour peer learning sessions held via Zoom for collaborative discussions and networking.

CONTINUED ACCESS

Access to all course materials for a limited time after the program concludes, enabling you to revisit and reinforce your learning.

TRANSFORM HOW YOU WORK WITH DATA

YOUR TRANSFORMATIVE JOURNEY

Identify Practical AI Applications for Data Analytics

Learn when, where, and how to apply AI tools to solve real challenges across data analysis, preparation, and modeling workflows.

Simplify AI Adoption with No-Code Solutions

Build confidence using AI tools to streamline data preparation, modeling, and insight communication—without heavy coding or technical barriers.

Enhance Data-Driven Reasoning

Strengthen your ability to translate AI-generated insights into clear, actionable recommendations for stakeholders to support better business outcomes.

PROGRAM OBJECTIVES

At the end of the program, you will be able to:

- Identify practical opportunities to apply AI across data analysis, preparation, and modeling workflows.
- Generate and communicate AI-driven insights to support better, faster decision-making.
- Collaborate confidently across teams with a practical understanding of AI in data analytics.

You will walk away with the confidence and practical experience to apply AI tools to real-world data challenges, communicate meaningful insights to both technical and non-technical audiences, and a clear roadmap to continue advancing your AI skills and supporting data-driven decision-making

A PROGRAM CERTIFICATE WILL BE AWARDED WITH THE SUCCESSFUL COMPLETION OF THE PROGRAM.

PROGRAM OVERVIEW

ASSESS AI DATA FUNCTIONS

- Foundations of Data Analytics
- Explore Data with AI
- Prepare and Transform Data
- Analyze Data with AI

BUILD AND DEPLOY AI MODELS

- Use No-Code/Low-Code tools to build AI agents.

EXPLORE ADVANCED APPLICATIONS

- Tune Models with AI
- Advanced AI Techniques
- Communicate Insights with AI
- AI in Practice

PROJECT SHOWCASE

- Develop a practical AI project for a problem or dataset.

- Deliver an AI-assisted project that can be applied for your real-life applications.

ACTION-ORIENTED CURRICULUM

UNPARALLELED EXPERTISE

Learn from experienced instructors with broad backgrounds in Data Science and Artificial Intelligence bringing extensive experience in AI applications and Design Thinking methodologies.

You'll engage with tailored content and participate in immersive sessions through a mix of interactive live sessions and self-paced learning modules, all aimed to help you gain insight into emerging AI topics, and utilize a user-centered approach to AI-driven problem solving for any role or industry.

DR. FRED POPOWICH

Professor, Computing Science,
Artificial Intelligence
SFU School of Computing Science

DR. STEVEN BERGNER

Associate Director
Data and Analytics,
SFU's Big Data Hub

MODULE 1

FOUNDATIONS OF AI FOR DATA ANALYTICS

- Understand the program's flow, learning objectives, and lab components.
- Examine key differences, benefits, and challenges of AI-powered data analysis.
- Use an industry-standard data science framework to structure AI projects.
- Install and configure the software and platforms required for hands-on exercises.
- Develop foundational coding skills crucial for AI-driven analytics.

INSTRUCTORS

Dr. Fred Popowich
Dr. Steven Bergner

MODULE 2

EXPLORING DATA WITH AI

- Formulate meaningful questions to guide analysis and extract actionable insights.
- Examine conventional Exploratory Data Analysis (EDA) and explore how AI improves pattern detection, anomaly identification, and data structuring.
- Identify missing values, uncover hidden patterns, and detect anomalies using AI-powered tools.
- Use Low-Code/No-Code and Natural Language Query (NLQ) tools to interact with real-world datasets efficiently.

INSTRUCTOR

Dr. Steven Bergner

MODULE 3

PREPARING & TRANSFORMING DATA WITH AI

- Examine how AI can assist with data preparation, and handle missing values, inconsistencies, and duplicates.
- Match schemas, link records, and generate new features with AI support.
- Transform and encode data for modeling and manage complexity using dimensionality reduction techniques.
- Use Low-Code/No-Code tools to clean and transform real-world datasets, and explore trade-offs in an AI-powered simulation.

INSTRUCTOR

Dr. Fred Popowich

MODULE 4

ANALYZING DATA WITH AI

- Uncover deeper insights with AI tools and consider real-world applications.
- Apply AI to detect patterns and relationships, perform correlation analysis and asses feature importance.
- Use AI to detect and interpret outliers and evaluate their impact, with examples like fraud detection.
- Use Low-Code/No-Code platforms to extract meaningful insights and support data-driven decisions.

INSTRUCTOR

Dr. Steven Bergner

MODULE 5

BUILDING AI MODELS USING NO-CODE/LOW-CODE TOOLS

- Explore how AI models identify patterns in data and adapt beyond fixed rules.
- Compare different model types and architectures using an AI-powered simulation to practice decision-making.
- Determine training-validation splits, choose appropriate evaluation metrics, and decide when to stop training.
- Use Low-Code/No-Code platforms to develop and evaluate machine learning models on real-world datasets.

INSTRUCTOR

Dr. Fred Popowich

MODULE 6

DEPLOYING AI MODELS USING NO-CODE/LOW-CODE TOOLS

- Explore deploying a model and compare deployment patterns like batch processing and real-time inference.
- Transition a trained model to production, considering performance, security, and deployment constraints.
- Deploy a model as an API and integrate with scripts, Google Sheets, or web apps.
- Develop a strategy for monitoring, improving, and updating models as data and business needs evolve.

INSTRUCTOR

Dr. Steven Bergner

MODULE 7

TUNING MODELS WITH AI

- Use AI tools to optimize hyperparameters and track tuning experiments.
- Select and refine features for models, evaluating trade-offs for performance.
- Move beyond basic metrics using advanced evaluation methods like Precision-Recall Curves and leverage AI tools to analyze errors and biases.
- Detect performance degradation and determine when a model requires retraining or updates.

INSTRUCTORS

Dr. Fred Popowich

MODULE 8

ADVANCED AI TECHNIQUES

- Explore architectures like CNNs, Transformers, GANs, LSTMs, and Diffusion models, matching them to real-world use cases.
- Learn how to find and select the right pretrained models for specific tasks.
- Combine multiple models to improve accuracy and robustness.
- Weigh trade-offs in size, cost, compute power, environmental impact, and explainability to optimize models for real-world deployment.

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MODULE 9

COMMUNICATE INSIGHTS WITH AI

- Convert model predictions and metrics into a clear narrative that explains key findings or supports decision-making.
- Select effective methods—visualizations, reports, or narratives—based on the needs of technical and non-technical audiences.
- Transform AI results into a compelling story, tailoring messaging and presentation for different stakeholders.

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MODULE 10

AI IN PRACTICE & NEXT STEPS

- Develop a practical AI project such as automating a task, drafting a project plan, evaluating deployment feasibility, analyzing data, or creating a training resource.
- Share project findings through concise, engaging presentations and participate in peer discussions.
- Reflect on course learnings, explore resources for continued AI adoption, and plan for future skill development.

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Dr. Steven Bergner

"This course was beauty in terms of what I'm going to be doing next year. [It] delivered exactly what I wanted. Now my fear of obsolescence is completely gone and I'm right back at the forefront of cutting edge tools."

Ashley Bennington, Manager HR Analytics | Colliers International

SUBMIT YOUR APPLICATION

ABOUT SFU BEEDIE

SFU's Beedie School of Business is a dynamic institution delivering cutting-edge research and education programs across three British Columbia campuses. We pioneered Canada's first Executive MBA and the first Indigenous Business Leadership EMBA in North America.

Accredited by AACSB and EQUIS, our reputation for innovation, social responsibility, and global perspective is recognized worldwide. Our alumni network spans 80 countries and comprises more than 30,000 successful graduates.

#1

COMPREHENSIVE UNIVERSITY IN CANADA
14 out of the last 15 years (as of 2023), according to Maclean's Magazine

1%

OF BUSINESS SCHOOLS
worldwide have AACSB and EQUIS accreditation

AACSB ACCREDITED

EQUIS ACCREDITED

ABOUT SFU'S BIG DATA HUB

SFU's Big Data Hub is a leading centre for data-driven research, education, and community engagement located at Simon Fraser University's Burnaby campus. It brings together interdisciplinary expertise to tackle complex challenges across sectors such as healthcare, public policy, and sustainability through advanced data analytics and artificial intelligence.

Equipped with state-of-the-art computing infrastructure and collaborative spaces, the Hub offers tailored training, consulting services, and partnerships that support innovation and applied learning. It serves as a gateway for organizations and researchers to work with top talent, obtain impactful big-data solutions, and even access cutting-edge technology at SFU's Cedar Supercomputer Centre.

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DIGITAL INNOVATION AND LEADERSHIP (DIAL)

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AACSB ACCREDITED

EQUIS ACCREDITED

PRME
Principles for Responsible Management Education

Simon Fraser University respectfully acknowledges the xʷməθkʷəy̓əm (Musqueam), Sḵwx̱wú7mesh Úxwumixw (Squamish), səl̓ilw̓ətaʔɬ (Tsleil-Waututh), q̓íc̓əy̓ (Katzie), kʷikʷəƛ̓əm (Kwikwetlem), Qayqayt, Kwantlen, Semiahmoo and Tsawwassen peoples on whose unceded traditional territories our three campuses reside.