



# NextED AI Business Strategy & Application Course

powered by Riff Analytics

With the rise of Artificial Intelligence (AI), Canadian businesses need to not only prepare, but equip themselves with skills to be competitive in this new data-driven economy.

NEXT Canada, through the launch of NextED, is offering a unique program for employees of large and medium-sized enterprises. The program will help participants understand the implications of data and AI as well as create strategy and technical insights to adopt AI into their businesses. The course will be delivered through a new online platform powered by Riff Analytics, a spin-out company of MIT Media Lab.

**This is Canada's premier AI Adoption Program  
for Business.**

# Background for the program

NextED AI Business Strategy & Application (powered by Riff Analytics), is the first of its kind in Canada, offering a hands-on approach to understanding and applying AI skills using a new experiential learning application called the Riff Platform.

## What the program covers

Artificial Intelligence has been an academic discipline for decades, but the availability of high powered computing has made it easy to apply AI principles and methods to business problems. In every industry, from manufacturing to finance to marketing, our collective future will be AI-driven. Companies failing to implement AI techniques such as machine learning, computer simulation, and predictive analytics will be surpassed by those that do.

This course will train participants in how to think like data scientists, but in the context of business problems. By combining hands-on learning of AI techniques using real data sets, with intra/entrepreneurship fundamentals, the course provides participants with the building blocks for starting an AI venture, either within their current companies or as a start up. The course includes interviews with AI innovators and business owners who are vanguards and leaders in their fields, as well as providing mentors to guide emergent thinking. Topics include data mining, machine learning, predictive analytics, decision trees, clustering, and deep learning.

### **NextED AI Business Strategy & Application Course**

#### **Course Duration:**

- 8 weeks online
- 8-12 hours per week

**"Canada has emerged as a leader in talent, research and development in artificial intelligence. The next step is for Canadian businesses to take advantage of our leadership position. At NEXT Canada, we can show industry how the adoption of AI can be part of their economic growth strategy. Our new interactive online learning platform, powered by MIT spinoff, Riff Analytics will be a first in Canada — and it will empower Canadian firms to prosper in the AI-driven world."**

**Joe Canavan, CEO of NEXT Canada**

# Program takeaways



The ability to develop a disruptive AI innovation and use various approaches to drive adoption of AI practices within specific disciplines and industries



An in-depth understanding of AI principles and hands-on techniques for applying AI to specific business problems in order to guide an organization in building out its AI practices



A certificate of participation in the founding course of NextED's AI Business Strategy & Application program will be awarded as a digital badge

## Who should take this program



### AI Business Strategy & Application Course

This 8-week course is for the doers of the business. You will have the internal insights to apply the gained knowledge and skill towards an AI strategy and action-plan. No technical expertise and knowledge is required.

```
self.file = None
self.fingerprints = set()
self.logdupes = True
self.debug = debug
self.logger = logging.getLogger(__name__)
if path:
    self.file = open(os.path.join(path, "request_seen.log"), "a")
    self.file.seek(0)
    self.fingerprints.update(s.request.fingerprint)

@classmethod
def from_settings(cls, settings):
    debug = settings.getbool("SUPERFILTER_DEBUG")
    return cls(job_dir(settings), debug)

def request_seen(self, request):
    fp = self.request_fingerprint(request)
    if fp in self.fingerprints:
        return True
    self.fingerprints.add(fp)
    if self.file:
        self.file.write(fp + os.linesep)

def request_fingerprint(self, request):
    return request_fingerprint(request)
```

“This course is hands-on. People work together on applied AI projects to create something completely new. You don’t just read or watch, you have to do something. We want to dispel mythologies and misunderstandings about AI — what it is, who does it, and why. Everyone can ‘do’ AI, just like everyone can ‘do’ Excel, and every business should be investing in their people to learn why AI is important to their future.”

**Sandy Pentland**

## What you will learn

This online course contains videos, interactive media, written materials, coding practice and assignments, and peer learning activities. Collaborative work is a key component of the course, enabled by innovative, AI-powered communication tools provided by Riff Learning Inc. The following outline describes what will be covered in this 8-week course.

### **ORIENTATION: INTRODUCTION TO THE COURSE**

The first week of the course welcomes participants into the online learning environment and lets them get familiar with tools and procedures, as well as meet other participants and course staff.

### **WEEK 1: BECOMING AN AI CHAMPION**

Get your hands dirty with data! Start learning practical AI design methodologies with introductory exercises and first principles

### **WEEK 2: TELLING A STORY WITH DATA**

Pitch your AI business idea by telling a story. Storytelling helps people connect with new ideas and increases the likelihood of acceptance and adoption, especially in new and emerging fields

### **WEEK 3: MODELING DATA USING MACHINE LEARNING**

Explore regression, the cornerstone of machine learning, which is the basis of many services used by businesses and consumers alike, such as image recognition and credit card fraud detection

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[www.riffanalytics.ai](http://www.riffanalytics.ai)

## **WEEK 4: CLASSIFYING DATA USING DECISION TREES**

Explore classification using random forest techniques, which can then be used to build a predictive model about future events

## **WEEK 5: THE MARKET FOR AI**

Begin working in teams to develop an AI venture plan starting with market analysis, while continuing machine learning techniques such as supervised and unsupervised clustering

## **WEEK 6: AI FOR COMPETITIVE ADVANTAGE**

Complete your hands-on data exercises with an advanced technique known as SVM, and learn how and why AI gives businesses competitive advantages

## **WEEK 7: USING AI TO MAKE DATA OPEN**

Learn how to operationalize an AI venture, and create a business plan. Successful operationalization often requires finding the right partners and creating shared incentives

## **WEEK 8: LAUNCHING AN AI PROJECT**

Pull together everything you've learned by rolling out your AI venture plan. The future of AI is in your hands...

## **VENTURE WEEK**

Determine next steps for moving your AI venture forward. Come to the NEXT Canada incubator in downtown Toronto to meet other participants, mentors, and industry leaders, while being part of the end of course pitch off!

**Course duration:** 8 weeks online, excluding orientation and awards ceremony in-person

**Course time commitment:** 8-12 hours/week of self-paced\* learning, online

*\*Readings and assignments take approximately 8-10 hours a week. Some of the content requires collaborative group work, amounting to approximately 2-3 additional hours.*

# NEXTEd

[www.nextcanada.com](http://www.nextcanada.com)



[www.riffanalytics.ai](http://www.riffanalytics.ai)

## Your Instructors for the AI Business Strategy & Application course

Your course instructors include these AI experts from Ryerson University, MIT, and Said Business School, Oxford University, who narrate the course through video instruction. They have guided the design of this course, including all assignments and exercises. Numerous other industry professionals appear in course videos to offer subject matter expertise in their fields.



**Hossein  
Rahnama**

Hossein Rahnama is the founder and CEO of Flybits, Inc, and a cofounder of Ryerson University's Digital Media Zone, as well as professor in the faculty of Communications and Design. He is also a visiting professor at the Human Dynamics group at the MIT Media Lab. In 2012, Dr. Rahnama was recognized by MIT Technology Review as one of the Top Innovators in the world under the age of 35. In 2017, he was recognized as one of Canada's Top 40 under 40.



**Alex "Sandy"  
Pentland**

Alex "Sandy" Pentland is a world renowned professor, researcher, author, speaker, innovator, entrepreneur, and advisor. He holds multiple academic and professional positions, including the Toshiba Professor of Media, Arts, and Sciences at MIT. He was declared by Forbes to be one of the "7 most powerful data scientists in the world", and he is a founding scholar in the field of computational social science.



**David Shrier**

David Shrier is the founder & CEO of MIT spinout Distilled Analytics, a lecturer with the MIT Media Lab, and an associate fellow with the Said Business School, University of Oxford. David is a serial innovation catalyst, having developed \$8.5 billion of growth opportunities with several startups as well as Fortune 1000.

## Your Course Guides



### **Course Moderator**

An AI expert who runs the course, guiding the rest of the support team to give you the best experience



### **Support Coaches**

One-on-one support to help with administrative and technical issues, available 9am-6pm ET



### **Subject Matter Experts**

Additional personnel to help with coding exercises and answer questions about AI concepts and techniques

# Collaborative by Design

Toronto-based tech incubator, NEXT Canada, is partnering with Riff, an AI learning platform focused on collaboration, to develop exceptional courses that help people learn and innovate better together. Courses are designed to accelerate the pace of innovation across Canada by building virtual communities that create and launch new ventures.

## About NEXT Canada

NEXT Canada is a national, non-profit organization that develops exceptional talent to build world-class ventures and propel technology adoption. Founded in 2010 as The Next 36 by a group of pioneering business leaders and academics, NEXT Canada is today a leader in the delivery of cutting-edge programming designed to foster lifelong entrepreneurship in three streams: NextAI, Next 36, Next Founders, and now with our newest stream NextED. Our programs, delivered through meaningful partnerships between government and the private sector, strengthen the foundations of Canada's current and future health and prosperity.

## About RIFF

Riff delivers augmented learning for business transformation through the Riff Platform, a collaboration environment that measures group dynamics to predict and improve individual outcomes. Riff Courses use synchronous communication to measure the ways in which people interact, creating richer learning experiences that connect participants.

Through assistive metrics, predictive analytics and tailored feedback, people using Riff develop the soft skills and collaboration techniques that underpin all high-functioning teams, both in the classroom and the workplace. The result is higher quality engagement, and better results.

Riff's augmented collaboration platform, high-quality course content, hands-on applied exercises, and an expert learning support staff, combine in online courses unlike anything else available today.



[www.nextcanada.com](http://www.nextcanada.com)



[www.riffanalytics.ai](http://www.riffanalytics.ai)

# How you'll learn

This course is delivered in weekly modules that feature a wide variety of content and activities designed to be challenging, but accessible. Each week, participants will:

- Read, view or interact with content that highlights the week's themes
- Connect and collaborate with other participants during live video chats and offline discussions, meeting in working groups intended to enhance the experience of learning online
- Apply learning in hands-on coding exercises that use real data sets shared with NEXT Canada specifically for use in this course
- Learn from experts in AI and business practitioners who have built AI ventures

## Technical Requirements

### Basic Requirements

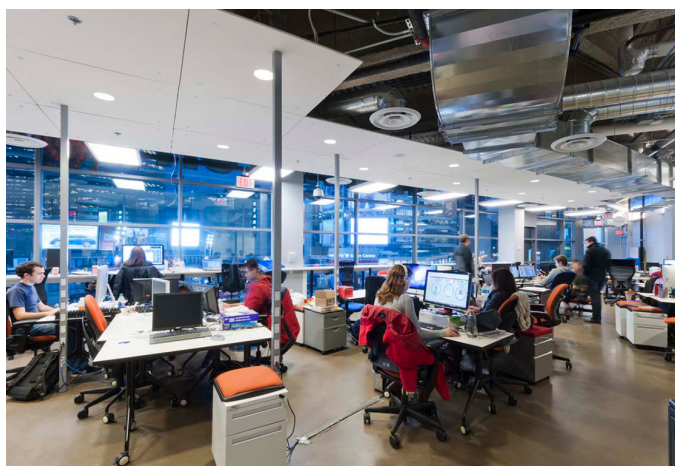
In order to complete the course, you'll need an active email account and access to the internet. For collaborative activities, you will need a computer equipped with a microphone and a camera, which you should know how to enable. You should feel comfortable using browser-based applications and performing basic computer operations. Some materials are provided in PDF, DOC, XLS, or PPT format, which may require you to download additional applications or browser extensions.

### Browser Requirements

This course supports two browsers for use on a desktop or laptop computer, Firefox and Chrome. Both work equally well and are recommended. The course may also be experienced in part on a mobile device, though not all functionality is mobile-enabled, such as the coding exercises.

### Additional Requirements

With this experience, you have the opportunity to attend a capstone event in the Greater Toronto Area during the last week of the course. AI leaders from various industries and market segments — many of whom will serve as course mentors — will be there to meet in person. Date and location to be confirmed.







# NextED AI Business Strategy & Application Course

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Are you ready to become an AI champion and build the next generation of AI-enabled products and services?

## CONTACT US

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