

# Masterclass Series

PRESENTED BY CMU AUSTRALIA | EMPOWERING FUTURE LEADERS



# MEET CARNEGIE MELLON'S INDUSTRY EXPERTS

**Learn from the school with leading research initiatives in smart cities, autonomous vehicles and robotics.**

Carnegie Mellon University Australia (CMU-A) is proud to present our very first Masterclass Series. It comprises five Masterclasses delivered live online that will provide you with a rapid dive in understanding cutting-edge developments in the Information Technology (IT) and public policy sectors.

Guided by the latest research and delivered by our world-renowned professors, this series will cover some of the world's most critical topics such as Artificial Intelligence (AI), Machine Learning (ML), data analytics and government and grand corruption in the digital age.

Over the course of this series, you will discover why Carnegie Mellon University is ranked #1 in Information and Technology Management, #1 in Analytics Education and #6 in Policy Analysis.

## **Upcoming Live Masterclasses**

### **AI and the Fourth Industrial Revolution**

February 25, 8am - 9:30am  
February 26, 4pm - 5:30pm

### **Digital Transformation and the New Realities**

March 4, 8am - 9:30am  
March 5, 4pm - 5:30pm

### **Big Data and Government: Strategies for Success**

March 11, 8am - 9:30am  
March 12, 4pm - 5:30pm

### **Machine Learning and Data Analytics**

March 17, 4pm - 5.30pm  
March 18, 8am - 9:30am

### **Public Entrepreneurship and Grand Corruption in the Digital Age**

March 25, 8am - 9:30am  
March 26, 4pm - 5:30pm

*All times are in Australian Central Daylight Time (ACDT)*



**QUESTIONS?**

Message us on Facebook

## **Contents**

AI and the Fourth Industrial Revolution	2
Digital Transformation and New Realities	3
Big Data and Government: Strategies for Success	4
Machine Learning and Data Analytics	5
Public Entrepreneurship and Grand Corruption in the Digital Age	6
Contact us	7



#### LOCATION

This is an online event. Details of how to attend will be sent to you when you register below.

#### DATE AND TIME

Thursday, February 25:  
8am - 9:30am

Friday, February 26:  
4pm - 5:30pm

#### SCHEDULE

One hour lecture

**Part 1:** Introduction to the 4th Industrial Revolution.

**Part 2:** Disruptive

Technologies: Robotics, Augmented/Virtual Reality, Drones, Natural Language Processing

**Part 3:** The need for a digital mindset

#### 30 minutes Q and A

#### FEES

No cost

## REGISTER NOW



## QUESTIONS?

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# AI and the 4th Industrial Revolution

## WHAT YOU'LL LEARN

We are living in the middle of one of the most important times in history - the 4th Industrial Revolution. At the heart of this revolution has been the rise of Artificial Intelligence (AI), robotics and The Internet of Things. We'll apply a birds-eye view to this revolution, the role that AI is playing in it, and the impact it is having on our everyday lives.

In this Masterclass, we will cover:

- How cutting-edge disruptive technologies, such as the Internet of Things (IoT), 3D printing and virtual reality have become the collective force behind many essential products and services.
- The importance of embracing these technologies and incorporating them into our workplaces.

After completing this masterclass, you will have an understanding of what AI is capable of now, where it can take us in the future, and the role it can play in your organisation.

## WHO IS IT FOR?

- Anyone wanting to learn more about the current and future uses of AI and Machine Learning.
- Senior managers wanting to introduction to how to develop a digital mindset.

## MEET YOUR EXPERT: DR ZBIGNIEW 'ZIG' ZDZIARSKI



Dr Zdziarski has been working and researching in AI since 2004 and obtained his PhD in AI at Trinity College, Dublin. At CMU-A, he lectures on topics such as Artificial Intelligence and Advanced Programming. Recently, Zig worked as a consultant in AI in for major banks, retailers, and insurance companies. He is Google certified as a Data Engineer Professional and a Data Engineer Trainer.



#### LOCATION

This is an online event. Details of how to attend will be sent to you when you register below.

#### DATE AND TIME

Thursday, March 4  
8am - 9:30am

Friday, March 5  
4pm - 5:30pm

#### SCHEDULE

One hour lecture

**Part 1:** What is digital transformation and how does it fit within today's social and economic context?

**Part 2:** Ways to assess your organisation's digital maturity and map a new pathway forward.

**Part 3:** Examples and case studies we can learn from.

#### 30 minutes Q and A

#### FEES

No cost

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# Digital Transformation and the New Realities

## WHAT YOU'LL LEARN

What information technology and systems are being used to digitally transform the world? How are they used to help a buyer connect to a seller? How are they helping suppliers interact with a customer? How can a sensor detect a tumour, and then notify a doctor? These fascinating questions are at the heart of how advances in information technology are changing the world.

In this Masterclass, we will cover:

- A framework to help you understand what digital transformation is, what technologies make it possible, and how it can be rolled out to achieve an organisation's strategic objectives.
- How these technologies and systems have made information flows more efficient and led to new processes that have transformed the way our society operates.

## WHO IS IT FOR?

- Those wanting to take the next step in their career by improving their understanding of information technology systems and how they work.
- Government, corporate and private sector staff wanting to use IT to drive organisational and technical change.

## MEET YOUR EXPERT: DR RIAZ ESMAILZADEH



Professor Esmailzadeh has helped some of the biggest companies in the world, such as Apple, Samsung and Hitachi refine their technologies and services. His inventions have become part of 3G and 4G standards and yielded 26 patents. As a Professor of Management of Information Technology at CMU-A, Riaz's interests include digital transformation and Fintech and Information Security.



#### LOCATION

This is an online event. Details of how to attend will be sent to you when you register below.

#### DATE AND TIME

Thursday, March 11:  
8am - 9:30am

Friday, March 12:  
4pm - 5:30pm

#### SCHEDULE

One hour lecture

**Part 1:** Community resistance and data analytics.

**Part 2:** A closer look at failures in the child protection system and what we can learn from them.

**Part 3:** Ethics, values and democratic requirements for success.

#### 30 minutes Q and A

#### FEES

No cost

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## QUESTIONS?

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# Big Data and Government: Strategies for Success

## WHAT YOU'LL LEARN

The way data is collected, distributed and analysed is continuing to transform policy and governance. The tools created using policy analytics can make for faster, cheaper, and, in some cases, more reliable decisions. But these tools can also bring with them community distrust and resistance.

Successes include tools that have provided for direct democracy through e-participation; allowed retrospective expunging of criminal offences following decriminalisation of certain offences; and provided credit worthy low-income earners with ratings that make it possible for them to borrow money for the first time. The failures include Australia's welfare payments recovery mechanism which precipitated numerous suicides and cost the Government AUD \$1.2 billion in compensation payments. Why the different outcomes? How can success or failure be predicted before it is too late? What are the strategies for success?

In this Masterclass, we will cover:

- The use and misuse of data by government and the lessons we can learn from these.
- The technical analysis and methods you can use to assess the likely success or failure of big data analytics.

## WHO IS IT FOR?

- Those seeking the perspective they need to lead in a digital world, with a focus on strategic understanding, organisational wisdom and innovation-based capabilities.
- Policy professionals who want to learn more about the use of analytics.

## MEET YOUR EXPERT: TIM O'LOUGHLIN



Professor O'Loughlin has extensive experience in sectors such as commerce and public administration and was formerly the head of the South Australian Government's Department of Transport and Infrastructure. He's also worked in the oil and gas industry and at CMU-A, he's a Professor of the Practice of Public Policy.



## LOCATION

This is an online event. Details of how to attend will be sent to you when you register below.

## DATE AND TIME

Wednesday, March 17:  
4pm - 5:30pm

Friday, March 18  
8am - 9:30am

## SCHEDULE

One hour lecture

**Part 1:** Data is the new oil but crude won't do!

**Part 2:** Understanding Artificial Intelligence and Machine Learning Foundations

**Part 3:** Succeeding with Business Intelligence

## 30 minutes Q and A

## FEES

Free

## REGISTER NOW



## QUESTIONS?

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# Machine Learning and Data Analytics

## WHAT YOU'LL LEARN

Analytics and Machine Learning (ML) are two of the most widely used buzz terms in the information technology sector, attracting millions in investment, but what exactly do they mean? And how do you get maximum value from them?

Data is the new oil but needs refinement before it can be impactful. Understand how machines 'learn' for themselves and extract knowledge from structured and unstructured data. We'll go through real-world examples of analytics and machine learning such as facial recognition technology and to help you understand this exciting, but often daunting topic.

In this class we will cover:

- How data yields Business Intelligence
- Machine Learning foundations and how to generate value for its application.
- How to correctly manage, read and decipher data and how it can improve business efficiency.
- The mistakes companies make when they rely too much on tools and technology without focussing on a wholistic approach.

## WHO IS IT FOR?

- Anyone wanting to use machine learning and data analytics to get a competitive advantage.
- Those who work with data scientists and programmers and want to understand and speak the same language.
- Mid-career professionals wanting to upskill.

## MEET YOUR EXPERT: DR MURLI VISWANATHAN



Professor Viswanathan is the big data guru at Carnegie Mellon University Australia. Since 2007, he has taught our students AI/Business Intelligence/Analytics, Machine Learning, Enterprise Architecture, JAVA, and Information Systems for Managers. His research interests include AI & Machine Learning, knowledge management and data mining for ubiquitous information systems.



#### LOCATION

This is an online event. Details of how to attend will be sent to you when you register below.

#### DATE AND TIME

Thursday, March 25:  
8am - 9:30am

Friday, March 26:  
4pm - 5:30pm

#### SCHEDULE

One hour lecture

**Part 1:** Myths and realities of corruption today

**Part 2:** Why has corruption become a more wicked problem in our digital globalised era?

**Part 3:** Combating corruption and improving governance

30 minutes Q and A

#### FEES

No cost

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**QUESTIONS?**

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# Public Entrepreneurship and Grand Corruption in the Digital Age

## WHAT YOU'LL LEARN

Discover the hidden world of grand corruption, which is undermining economic and political progress of countries around the world and the critical challenges they present for policy actors and stakeholders.

Unless the abuse of high-level power is contained and rule of law strengthened, many countries will be driven to economic misery and political disorder, with international repercussions in terms of money-laundering and collateral crimes.

In this Masterclass, we'll cover:

- How new technologies are making corruption easier to commit and hide.
- Real-world examples of the forces and factors driving it across the world.
- Where, when, and how grand corruption is being effectively managed.
- The lessons policymakers and reformers in highly corrupt countries can consider to effectively combat this crime.

## WHO IS IT FOR?

- Anyone who is passionate about equality, human rights and global governance.
- Policymakers, advocates and members from the human service, government and non-government, private and corporate sectors.

## MEET YOUR EXPERT: PROF. EMIL BOLONGAITA



Professor Bolongaita is a Distinguished Service Professor of Public Policy and Management and the Head of CMU-A. He was formerly Unit Head of the Central Asia Regional Economic Cooperation Program and a Public Management Specialist at the Asian Development Bank. He's also led governance and anti-corruption projects of the World Bank and the US Agency for International Development.

# Want to learn more?

A private, global research university, Carnegie Mellon stands among the world's most renowned educational institutions. It is consistently ranked among the top 25 universities in the world.

With cutting edge brain science, path-breaking performances, innovative start-ups, driverless cars, big data, big ambitions, Nobel and Turing prizes, hands-on learning, and a whole lot of robots, CMU doesn't just imagine the future, we create it.

If you have any questions at all about studying with CMU Australia, please don't hesitate to email us at: **studentadvisor@australia.cmu.edu**

## Our Master's Degrees

Public Policy & Management  
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