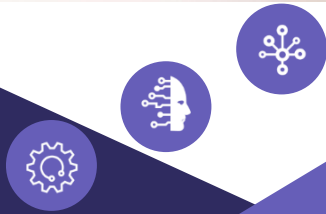


ARTIFICIAL INTELLIGENCE

Introduction, Applications and Implications



Certificate Program



<https://academy.iZen.ai>

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OVERVIEW: AI LANDSCAPE

We are in the “Cognitive Era”, as Artificial Intelligence (AI) is beginning to transform the way we live, work and do everything. It is already a part of our everyday life, though we may not notice it. While many are excited about it, a few are worried. Even nations are vying for a leadership position in AI technologies and applications.

We should realize that AI is not about building smart machines to replace humans. But it is more about building smarter organizations, and smart solutions that a human brain cannot comprehend. It is primarily about “collective-Intelligence” or using AI along with human intelligence to solve real-life problems for human empowerment.



HIGH DEMAND

Corporations are aggressively adapting to AI wave and hence hiring and developing AI-talent.



HUGE SUPPLY GAP

Demand for qualified AI talent far exceeds supply. That means less competition and more pay for trained-people.



BRIGHT FUTURE

According to World Economic Forum, automation will generate 133 million new jobs by 2022 and these jobs are not going away.

This course gives you an introduction to AI, elements of AI, their applications, case studies, business implications and the future of AI. With a solid foundation, you can build expertise to align with the changing world.

BENEFITS OF THIS PROGRAM

- ✓ Demand for AI talent is exploding. Future-proof your career by developing AI skills
- ✓ Learn AI from a federation of experts with decades of experience in academia and also in various Silicon Valley industries
 - Learn by watching interviews with several experts in various sub-domains of AI-ML
 - Real-life case-studies and use-cases to give you practical insights
- ✓ Get a certificate in “AI and Applications”



WHO IS THIS PROGRAM FOR?



- ✓ Anyone interested in developing AI-awareness
- ✓ A student seeking employment, by building a foundation in AI
- ✓ An employee interested in re-skilling or up-skilling for a career growth
- ✓ A teacher interested in becoming a trainer in AI
- ✓ A manager wanting to unlock new opportunities or to bring AI into their products and offerings

PREREQUISITES:

- ✓ Basic knowledge of using computers
- ✓ No other pre-requisites

WHAT WILL YOU LEARN?

Artificial Intelligence (AI) has become a foundational technology for building the next generation of applications in industries starting from healthcare to financials to retail. No industry or sector is untouched by the potential of AI algorithms and tools.

MODULE 1 Introduction to AI

1. Natural Intelligence
2. What is Artificial Intelligence?
3. The History of AI
4. Types and Elements of AI
5. Why should you learn AI?



MODULE 2 Machine Learning

1. What is Learning? Types of Learning
2. What is Machine Learning?
3. Supervised, Unsupervised, Reinforcement Learning
4. Machine Learning vs. AI/Data-Science/Statistics/Human-Learning / Classic-programming
5. Deep Learning and Neural Networks



MODULE 3

Natural Language Processing (NLP)

1. What is NLP?
2. Why should you learn NLP?
3. Key elements of NLP
4. Progress, challenges and evolution
5. Rule-based and ML-based NLP
6. Applications of NLP

MODULE 4

Computer Vision

1. Making machines “see”
2. History of computer-vision
3. Science and Technology of computer vision
4. Applications of computer vision



MODULE 5

Robotics and Automation

1. What are Robots? History of Robots
2. What is Robotics?
3. AI and Robotics
4. How do Robots work?
5. Progress and challenges of Robotics
6. Various applications of Robotics
7. Human-Robot Interactions, Laws of Robotics
8. Singularity Vs. Multiplicity

MODULE 6

Applications of AI

1. Autonomous Vehicles:
How do they work? Evolution and adoption barriers, Implications
2. Gaming:
Chess and AI (Deep-Blue, DeepMind, Alphazero)
3. Learning and Development
4. Other Applications:
Agriculture, Healthcare, Customer-support, Legal, HR, Finance

MODULE 7

Implications and Future of AI

1. AI strategies for the leadership
2. Future evolution of AI
3. Implications of AI: Man Vs. Machine
4. Computational Ethics



WHO WILL YOU LEARN FROM?

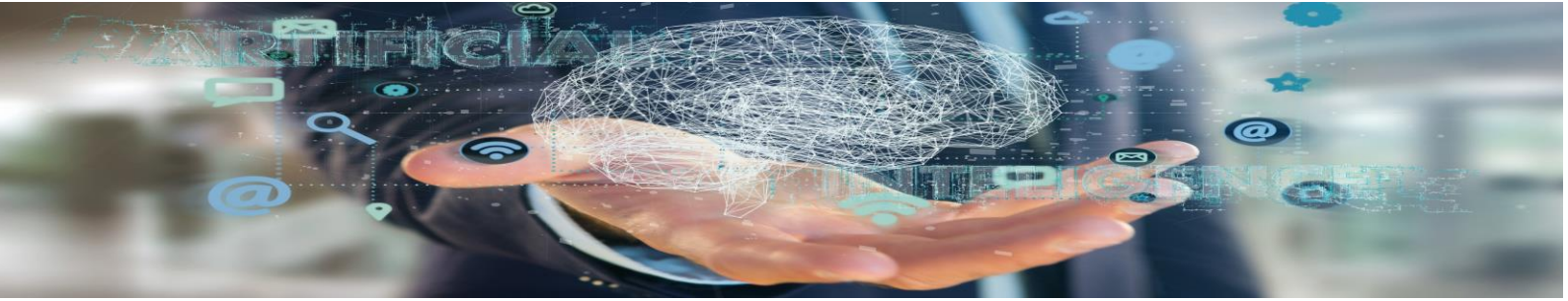


PROGRAM FACULTY

Dr. Raju Pandey is a Professor Emeritus in the Computer Science department at the University of California at Davis, where he developed and taught graduate and undergraduate courses in programming languages, operating systems, distributed systems, Internet of Things, Wireless sensor networks, Web-based systems, and compilers.

He is also the CEO and founder of Thinking Books, a software Infrastructure and Tools company. Dr. Pandey has a deep interest in math and computer science education and has developed novel interactive methods and tools for teaching both algorithmic and system aspects of Computer Science courses.

- Dr. Pandey's research and entrepreneurial interests lie in AI, Programming Languages, Blockchain, and Internet of Things. Specifically, his interests are driven by the need to build software systems that are easier to build, analyze and deploy. In this regard, Dr. Pandey has developed a novel software platform for building multi-platform AI, Blockchain, Mobile, and IoT applications. The platform includes a next-generation programming language, Ankur, that Dr. Pandey has designed and implemented. The platform will enable development of AI applications in which both algorithm-driven (deterministic) and data-driven (non-deterministic) components of AI applications can be integrated seamlessly
- He has published 40+ papers in conferences and journals and holds 16+ patents in software, visualization, wireless networks, data analytics, security, and control systems
- His first startup, SynapSense, was a pioneering IoT company, later acquired by Panduit
- Dr. Pandey holds a B.Tech. degree in Computer Science from IIT (Indian Institute of Technology), Kharagpur, and Ph.D. in Computer Science from the University of Texas at Austin



GUEST SPEAKERS



Dr. Asif Qamar
VP, and Chief Architect,
ML/Analytics

Asif is currently working at Cornerstone developing machine-learning and big-data platform for HR/workforce applications. The impact of this work has been widely reported in various magazines, and also found mention in a White House report on employment. He was also instrumental in building predictive analytics and high-performance data-mining at Oracle corporation.

He is a very passionate teacher and taught Computer Science for over 9 years at University of California, Berkeley.

Asif has a Ph.D. in Theoretical Physics (Syracuse University), and an MS in Computer Science (University of Illinois).



Kartik Hegde
Ph.D. Student

Kartik is a computer architect and a Ph.D. student at the University of Illinois, Urbana-Champaign. Before that, he worked with ARM Research on Machine Learning. He is currently exploring the development of accelerators targeted at Deep Learning.

Kartik works on building efficient processors for Machine Learning. He is now selected as a Facebook Fellow, to help them rev up Deep Learning for mobile devices.



Laxmish Bhat
President, iZen ai, Inc.

Laxmish is a Business Management and Product Development expert, with over 24 years of experience working with High Tech and Research industry. He worked in product development and consulting leadership roles for top global companies like Wipro, HCL, and Brocade.

He co-founded iZen to take education in emerging technology areas to all corners of the world, and to bring emerging tech to education for better student engagement and teacher effectiveness.

Laxmish holds an MS in Computer Science (NJIT, USA) and an MBA (IIM-Ahmedabad, India).

HOW WILL YOU LEARN

- ✓ Online using Desktop, Laptop or Mobile devices
- ✓ Learn at your own convenient time, and pace
- ✓ Video lectures delivered from a cloud LMS platform
- ✓ Quizzes online remote
- ✓ Hands-on projects, and industry case studies for the reinforcement of the learning

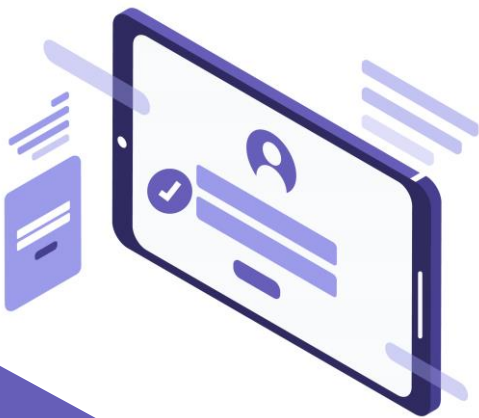
WHAT IS THE DURATION OF THE PROGRAM?

- ✓ 6 weeks, around 5 hours per week, or a total of 30 hours
- ✓ Rolling enrollment allows you to start any time. The duration can be aligned to your requirements.



ABOUT iZen

iZen is a Talent Empowerment company, offering end-to-end solutions for skill development and employability, leveraging the power of AI and other digital technologies. The company was founded in Silicon Valley, California with a global vision to incubate innovation and to provide a platform that gives access to knowledge, skills, and advisory to empower the next generation workforce and students. iZen brings you internationally recognized standard programs, to set you apart and to future-proof your career.



HOW DO I ENROLL IN THE COURSE?

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