

AI ESSENTIALS

Artificial Intelligence for Everyone



- 100% Online, Self-directed
- High demand for certified professionals
- Capstone project, DIY activity, Quizzes
- Gamification, Real world case studies

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OVERVIEW: AI Essentials

This course introduces beginners to the fascinating world of Artificial Intelligence. Through engaging content, real-world case studies, interactive quizzes, and project-based learning, students will explore how AI works, where it's used, and how it's shaping the future.



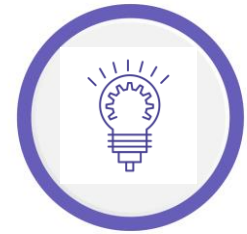
HIGH DEMAND

AI-related job postings in the U.S. have grown faster than the overall job market, with demand increasing steadily even amid broader hiring slowdowns - making AI skills highly sought after by employers



HUGE SUPPLY GAP

U.S. companies may need over 1.3 million AI professionals by 2027, but the current talent pool is far smaller, leaving nearly half of AI jobs potentially unfilled without upskilling.



BRIGHT FUTURE

Jobs requiring AI fluency have expanded significantly in recent years, and roles where AI skills are needed are among the fastest-growing in the American job market - giving learners an edge in future career opportunities.

BENEFITS OF THIS PROGRAM

- ✔ **Future-Proof Your Career:** Build a strong foundation to bridge the "Huge Supply Gap". The U.S. companies are projected to need over 1.3 million AI professionals by 2027, making these skills highly sought after even during hiring slowdowns.
- ✔ **Learn from Distinguished Experts:** Gain clear insights and professional guidance from professors and Silicon Valley entrepreneurs with decades of experience in AI and computer science.
- ✔ **Master Practical Applications:** Move beyond theory with real-life case studies and a hands-on Capstone Project, where you will use No-Code tools to build a functional AI prototype.
- ✔ **Engaging, Gamified Experience:** Stay motivated through a "Learn by Doing" approach featuring interactive quizzes, scenario-based games, and practical labs

WHO IS THIS PROGRAM FOR?

- ✔ **Curious Beginners:** Individuals with little or no prior knowledge of AI, who want to build a strong foundation to stay relevant and future-ready in today's digital world.
- ✔ **Future-Focused Students:** High school and college students eager to transition from being technology consumers to becoming thoughtful AI creators.
- ✔ **Strategic Professionals:** Employees from government agencies and private organizations seeking to understand AI's practical applications to improve products, processes, and personal productivity.
- ✔ **Non-Technical Leaders:** Managers and decision-makers who need to speak the "language of AI" to lead interdisciplinary teams, strategize implementation, and promote AI literacy within their departments.

HOW WILL YOU LEARN?



- ✔ Study at a time and speed that suits you best.
- ✔ Utilize a desktop, laptop, or mobile device to access online learning.
- ✔ If internet access is unavailable, utilize the iZen-LEAP® box for course access on your computer or mobile device.
- ✔ If you lack access to a computer or mobile device, connect the iZen-LEAP® box to a TV or monitor and start learning.

PREREQUISITES & COMPLEMENTARY COURSES:

- ✓ No prerequisites are required for taking this course.

WHAT WILL YOU LEARN?



MODULE – 1: AI Foundations and the Evolution

- ✓ Human Intelligence vs. Machine Intelligence
- ✓ Evolution of AI (The 3 Waves)
- ✓ Assignment: Map AI Around You
- ✓ Scenario Game: The Director's Dilemma
- ✓ Why Should You Learn AI
- ✓ MythBuster Game

MODULE – 2: Generative AI, the Creator

- ✓ Introduction to Generative AI
- ✓ Large Language Models (LLMs)
- ✓ Image & Media Generation (Diffusion Models)
- ✓ The Art of Prompting "How to Talk to AI"
- ✓ Prompt Engineering Lab-1: The Iteration Game
- ✓ Prompt Engineering Lab-2: The Multi-Modal Storyteller
- ✓ Scenario Game - Viral Campaign Crisis
- ✓ Jeopardy Game

MODULE – 3: Predictive AI, the Analyst

- ✓ Data, the fuel of AI
- ✓ Machine Learning (The Engine)
- ✓ Hands-on lab Google Teachable Machine
- ✓ Computer Vision (The Eyes)
- ✓ Language Processing
- ✓ Lab Analyzing the sentiment of movie reviews
- ✓ Robotics (AI in Motion)
- ✓ Quiz
- ✓ Quiz: Who Wants to be an AI Guru

MODULE – 4: AI in Action – Real-world Applications

- ✓ AI in Daily Life: The Personal AI-partner
- ✓ Mini-Activity: The Trip Planner Challenge
- ✓ AI in Industry
- ✓ AI for Social Good
- ✓ Scenario Games
- ✓ Assignment: The Rise of Virtual Influencers

MODULE – 5: AI Career Paths and Opportunities

- ✓ The AI Industrial Map
- ✓ Emerging Roles: The New Frontier
- ✓ Future-Proof Skills: Human + AI Advantage
- ✓ Hear from Experts
- ✓ MythBuster Game

MODULE – 6: Risks, Ethics, and Society

- ✓ Can you trust AI: Reliability & Security Risks
- ✓ Lab The Hallucination Hunt
- ✓ Interactive Activity Real or AI
- ✓ Is AI Fair: Bias, Fairness & Inclusion
- ✓ Lab The Bias Audit
- ✓ Legal & Creative Dilemmas
- ✓ Ethics & Governance
- ✓ Lab Safety Guardrails and Jailbreak
- ✓ Who Wants to be a Cyber Guru Game
- ✓ Quiz

MODULE – 7: Trends and Future

- ✔ Trends and Future
- ✔ Agentic AI
- ✔ Emerging Frontiers
- ✔ The Future Workforce Human + AI
- ✔ Lab The Hybrid Intelligence Sprint
- ✔ Jeopardy Game

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 first startup, SynapSense, was a pioneering IoT company, later acquired by Panduit.
- ✔ His research and entrepreneurial interests lie in AI, Programming Languages, Blockchain, Internet of Things, Cloud, Security, and Privacy. Specifically, his interests are driven by the need to build software systems that are easier to build, analyze and deploy.
- ✔ In this regard, he 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.
- ✔ In addition, he consults extensively with companies on AI, Blockchain, IoT, Cloud, Mobile Computing, and Distributed Systems.
- ✔ He has published more than 40 papers in conferences and journals and holds over 16+ patents in software, visualization, wireless networks, data analytics, security, and control systems.
- ✔ 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.

WHAT IS THE DURATION OF THE PROGRAM?

- ✓ Total of 70-80 hours
- ✓ Rolling enrolment allows you to start any time.
- ✓ The course duration can be aligned to your schedule and 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?

Contact
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<https://academy.izen.ai>

