AI Enterprise Workflow Certification
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Let’s talk about AI Skills....
Skills in the era of AI!

“Ginni Rometty: AI To Change 100% Of Jobs Within The Next 5-10 Years”
Building the Workforce of the Future Conference in New York

“IBM CEO Ginni Rometty said companies have to change the way they hire, or the skills gap will become a crisis”
World Economic Forum’s 2019 annual meeting in Davos

“I believe that 100% of jobs will change in the era of AI and that productivity gains resulting from these technologies will ultimately create more jobs than they replace. The priority right now is to help people around the world prepare for these jobs and benefit more from the prosperity that new technology creates”
Ginni Rometty at CES
Why it matters.....

"Today, 63% of executives cite a shortage of talent as a top barrier to adopting AI technology"

McKinsey & Company projects that demand for deep analytical professionals could exceed the supply by 140,000 to 190,000 positions in the United States alone, noting that this supply constraint will be global. source

Source: Shifting toward Enterprise Grade AI
On the road to AI, a continuum of skills is essential

Skills development in DS, ML and AI are strategic in preparation for a world of embedded AI
New skills are required beyond “Learning a new product”
Relevant Machine Learning/AI Skills Competencies

- Probability, Statistics, Linear Algebra
- Computer Programming/Visual Tools
- Data Science Methodologies
- Data Preparation
- Model Building (Supervised/Unsupervised/Deep/Reinforcement)
- Model Use - prebuilt Models
- Model Deployment
- Big Data
- Visual Recognition
- Text Processing
- Speech Recognition
- Tone/Empathy

Refresh / Acquire
What is a Certification?  
Not to be confused with a Badge or a Certificate

<table>
<thead>
<tr>
<th>Badges</th>
<th>Certificates</th>
<th>Certifications</th>
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<tbody>
<tr>
<td>Digital representation of knowledge, skill</td>
<td>Represents the completion of a learning path around a specific job</td>
<td>Recognition tied to real-world experience within a job role or with a specific</td>
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<tr>
<td>or an activity</td>
<td>role.</td>
<td>product/solution.</td>
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<td>Obtained after an educational process</td>
<td>Obtained after an educational process</td>
<td>Obtained after a third party Proctored assessment process.</td>
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<tr>
<td>Recognition for skills / validation &amp;</td>
<td>Recognition for skills that are valued in key job roles</td>
<td>Recognition for deep skills within a solution or product area. Valued by</td>
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<td>shareability</td>
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<td>hiring managers</td>
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On the road to AI, a continuum of skills is essential
AI Enterprise Workflow Certification

Audience:
Machine Learning Practitioners / Experienced Data Scientists

- Using a use case/real world scenario to build an end to end AI solution
- Leveraging Design Thinking to facilitate translation of business goals into AI technical implementations
- Machine Learning + and specific narrow-AI functionality
- Leveraging python + IBM Technologies

TRAINING
40 Hours Course
COURSERA

CERTIFICATION TEST
60 Questions
PEARSON/VUE
Prerequisites

- Fundamental understanding of Linear Algebra
- Understand sampling, probability theory, and probability distributions
- Knowledge of descriptive and inferential statistical concepts
- General understanding of machine learning techniques and best practices
- Practiced understanding of Python and the packages commonly used in data science: NumPy, Pandas, matplotlib, scikit-learn
- Familiarity with IBM Watson Studio
- Familiarity with the design thinking process
AI Enterprise Process
Grounded in Design Thinking using a Real World Scenario

1. Identify Business opportunity
2. Find data sources
3. Explore/Visualize data
4. Clean data
5. Feature engineer data
6. Additional data
7. Train models
8. Retrain model
9. Measure success
10. Monitor and manage
11. Deploy best model
12. Leveraging Watson for specialized models (visual recognition/NLP)
IBM AI Enterprise Workflow Courses on Coursera

- AI Workflow: Business Priorities and Data Ingestion
- AI Workflow: Data Analysis and Hypothesis Testing
- AI Workflow: Feature Engineering and Bias Detection
- AI Workflow: Machine Learning, Visual Recognition and NLP
- AI Workflow: Enterprise Model Deployment
- AI Workflow: AI in Production

https://www.coursera.org/specializations/ibm-ai-workflow
<table>
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<tr>
<td>Scientific, Mathematical, and technical essentials for Data Science &amp; AI</td>
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<td>Applications of Data Science &amp; AI in Business</td>
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<td>Data understanding techniques in Data Science &amp; AI</td>
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<td>Data preparation techniques in Data Science and AI</td>
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<td>Data Science and AI techniques and models</td>
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<td>Evaluation of AI models</td>
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<td>Deployment of AI models</td>
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Technology Stack

https://www.ibm.com/certify/cert?id=C0004400
Getting Started

Aspiring Data Scientists

Beginner
• IBM Data Science Specialization
• Applied AI

Intermediate
• Advanced Data Science Specialization

Advanced/ Experienced Practitioners
• AI Enterprise Workflow Specialization

• Join AI Learning Community
  https://ibm.biz/AILearnCommunity

  and get a complimentary month of

  Coursera

  

• Learn:
  https://www.coursera.org/specializations/ibm-ai-workflow
• Certification Test:
  https://www.ibm.com/certify/cert?id=C0004400