Artificial Intelligence and Machine Learning

OVERVIEW

In today's data-driven world, the importance of AI technology cannot be overstated. With both humans and machines generating massive amounts of data, it can be overwhelming to interpret, process, and utilize it for complex decision-making. That's where AI comes in.

Our micro credential course on AI/ML will equip you with the knowledge and skills to harness the full potential of this transformative technology. From credit processing to product recommendations, customer support to fraud detection, you'll learn about the numerous real-world applications of AI.

Delve into the backend systems that power AI, including machine learning (ML) models and algorithms, as well as deep learning techniques. Discover how AI automatically learns from past data using statistical techniques, and how deep neural networks are used for tasks like speech and image recognition.

By combining the power of these technologies, you'll be able to enhance your natural skills and leverage AI to make a positive impact on your community and solve real-world problems. Don't miss out on this opportunity to gain a comprehensive understanding of AI/ML and learn how to use it to drive innovation and success.

Don't pass up this chance to learn everything there is to know about AI/ML and how to use it to improve your own community and solve problems in the real world.

Join our micro-credential program right away!

PROGRAM HIGHLIGHTS

Services Offered By Industry Coaches

- Earn while you learn! Our microcredential program compensates learners upon completion
- Insights from renowned faculty and industry experts
- Obtain a generalized knowledge of AI, its potential and limitations
- Activities and assignments in each module demonstrate your understanding of concepts
- New information is connected to existing knowledge and real-world tasks

Services Offered By Industry Experts

- Personalized feedback, support, and network development
- Live weekly office hours with faculty and industry experts

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WHO IS THE PROGRAM FOR?

Beginners

Those who are new to artificial intelligence and machine learning (AI/ML) who want to gain a technical understanding of fundamental concepts. Prior computer science experience is not required to learn about and engage with this technology. Using culturally relevant examples and real world applications, participants will discover how AI/ML can be adapted to their interests.

Practitioners

Those with some familiarity with AI/ML will extend their understanding and develop additional skills to apply culturally relevant, solution-oriented approaches to the technology. AI/ML's adaptability will be explored and applied to diverse scenarios based on participants' unique interests using industry standard tools and techniques.

Future Developers

Those who arrive with more in-depth knowledge, or obtain it through previous modules, will expand their knowledge, increase their programming skills, and create culturally relevant, practical applications based on their individual interests. Learn skills that will help to create the foundation for your career aspirations through the development and training of AI/ML models and associated applications in which they would be deployed.

WHAT WILL YOU LEARN?

In this program, students will learn about AI/ML systems in dynamic and relevant ways. AI/ML technology presents opportunities for students to examine:

- What it is and what it isn't
- How its created and used
- How it impacts everyday life and our communities
- The importance of cultural relevance in technology development/deployment
- How to personalize it to your own interests
- Reflect on one's experience through reactions, feedback, and comments

PROGRAM EXPECTATIONS

Learners completing courses in the microcredential program are expected to:

- Complete the learning activities in the given timeframe.
- Dedicate the time necessary to complete learning activities and assignments in each module.
- Engage with material, other learners, and course facilitator(s).

PROGRAM SCHEDULE

COURSE 1: How Does AI/ML Impact Culture?

Discover the ways in which AI/ML are used and sometimes abused, and the importance of data in informing these technologies. Upon completion of course 1, participants will have a generalized knowledge of AI, its potential and limitations, and the technical skills and knowledge to use programming to make a positive impact on culture.

COURSE 2: Harnessing the Power of AI: Enhancing Community AI/ML in Real Life

AI/ML has the potential to bring people and ideas together in powerful ways. Explore how these tools can create dynamic community interactions. Upon completion of course 2, participants will have the ability to apply machine learning tools to solve problems and address challenges facing their own communities and to propose and implement solutions using AI tools and techniques.

COURSE 3: Applying AI to your own problems and interests

Build on your knowledge of AI/ML and its applications, and uncover how you can use these technology solutions in your everyday life. Upon completion of course 3, participants will have a deeper understanding of how AI/ML is being used in their area of interest and will have the knowledge and skills to propose and implement solutions using AI tools and techniques to develop and train models to solve problems.

COURSE 4: Culturally Responsive AI in Practice

Explore the ways in which AI/ML can be adapted and made relevant to cultural needs and experiences. Upon completion of course 4, participants will have a deeper understanding of the importance of culturally responsive AI and will have the knowledge and skills to design and implement AI systems that are inclusive and respectful of diverse cultures and communities.

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COURSE 5: DIY AI - Build your own AI application

Put your learning into practice and create your very own application using AI/ML. Upon completion of course 5, participants will have the knowledge and skills to use AI to build their own applications and will be able to identify and solve problems using AI tools and techniques.

LEARNING ACTIVITIES

Learning Enrichments

- Personal reflection
- Practice activities
- Peer discussions
- Interactive quizzes

Learning Engagement

- Participants will engage in experiential learning activities that will expand concepts. Projects and discussions based on unique interests will provide opportunities to expand knowledge and facilitate the development of culturally informed applications.
- Interested in gaming? Art? Music? Science? Math? Your work can reflect your passion, creating meaningful knowledge acquisition and application development.
- Group projects

LEARNING METHODS

- Challenge-based learning activities
- Industry experts and credentialed guest speakers provide a rich learning environment.
- Instructional methods that support diverse learners
- Activities and assessments that tap into learners' prior knowledge and experience and encourage active learning
- Authentic assessments that include challenge-based learning, scenarios, and hands-on practice activities
- Encouraging learner motivation through selected use cases and project-based learning
- Scaffolding and chunking of information to support learning for all students
- Transparency of course expectations and promoted competencies so students know what they will be learning and exactly what to do to learn the content.
- Encouraging social learning through a learning community
- Adaptive learning activities, continuous feedback

PROGRAM FACULTY

Program Developers

CARL S. MOORE, PHD - CONSULTANT: Carl is a teacher, learning scientist, curriculum developer, and instructional designer. He also serves as the Vice President of Teaching and Learning at Howard Community College.

KOFI NYARKO, DENG - MORGAN STATE UNIVERSITY, CENTER FOR EQUITABLE AI & MACHINE LEARNING SYSTEMS: Dr. Nyarko is the director of Morgan State University's Center for Equitable AI & Machine Learning Systems. He is also the director of Morgan's Data Engineering and Predictive Analytics research lab.

GABRIELLA WATERS - MORGAN STATE UNIVERSITY, CENTER FOR EQUITABLE AI & MACHINE LEARNING SYSTEMS: Gabriella is a AI/ML and cognitive science researcher at Morgan State University's Center for Equitable AI & Machine Learning Systems (CEAMLS). She is also a member of the Center's leadership team working to fulfill CEAMLS's mission.

REQUIREMENTS: WEB-ENABLED COMPUTER, CURRENT INTERNET BROWSER