Thank you for your interest in the Mississippi Artificial Intelligence Network (MAIN), the nation's first statewide AI initiative!

For any questions, please contact MAIN@mgccc.edu

Connect with MAIN! https://dot.cards/kollinnapier

The Intro to AI course provides a comprehensive overview of Artificial Intelligence, exploring its history, foundational principles, ethical considerations, diverse applications, and more! This self-paced, 16-week (16 module) Canvas course includes 64 hours of content, allowing participants to progress at their own pace. Complete as much as you want when you want. Participants can earn 0.4 CEUs after completion of each module, totaling up to 6.4 CEUs upon full course completion. New modules unlock after the completion of the prior. Course access and CEUs are **free** with the discount code **k12ai25** applied during account creation**.**

The Canvas course starts July 1, 2024.

Entirely online, this course requires no prerequisites, technology background, or specific device. Utilizing AI and other "no-code" tools throughout. The Intro to AI Canvas course is suitable for professional development across various workforce sectors, beyond K-12 education and teaching.

Registration Instructions:

1. Create an Account using the Discount Code (Class Unlock Key): k12ai25 at MGCCC Workforce Solutions: https://mgccc.augusoft.net
2. Click Browse All Courses
3. Click AI for Workforce
4. Find Introduction to AI K-12
5. Click Add to Cart
6. Checkout

Be sure to inform other teachers around Mississippi about the Intro to AI course!

Course Description:
This course, presented in a "Train the Trainer" format, provides a comprehensive overview of artificial intelligence, covering fundamental concepts, technological advancements, and real-world applications. It begins by distinguishing AI from automation and tracing its history, including the evolution of integrated chips. Participants explore emerging AI technologies powered by Big Data, IoT, and 5G, and delve into AI applications across various industries, emphasizing Industry 4.0. The curriculum includes hands-on experience with AI project cycles, data handling, modeling, evaluation, and deployment, with a focus on ethical considerations and societal impacts. Key topics include machine learning (ML) and deep learning (DL) fundamentals, generative adversarial networks (GANs), variational autoencoders (VAEs), and the roles within AI/data science teams. Practical projects using no-code tools for statistical data, natural language processing (NLP), and computer vision are integrated. The course concludes with a forward-looking perspective on AI, discussing future possibilities like quantum computing, hardware acceleration, artificial general intelligence (AGI), and the transformative potential of reinforcement learning.

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INTRO TO AI REGISTRATION INSTRUCTIONS

01

Create an Account

Go to MGCCC Workforce Solutions, click "Create a New Account," and select "Student Profile": https://mgccc.augusoft.net

02

Apply Discount Code During Setup

Enter the discount code (class unlock key) to access the course for enrollment and earn CEUs for free! Code: **k12ai25**

03

Find the Course

After creating your account, go to the home page, click "Browse All Courses," and find the "Introduction to AI" course.

04

Complete Checkout

Click on the course, add it to your cart, and proceed with checkout to enroll in the course!

05

Course Start Date: July 1, 2024

Although enrollment for the Canvas course is open now, the course will not start until July 1, 2024.

Questions? Email MAIN@mgccc.edu

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Mississippi Artificial Intelligence Network (MAIN)

Mississippi K-12 Teachers! Want to earn FREE CEUs? Interested in AI?

Enroll in the **Intro to AI** Canvas course using the discount code (class unlock key) **k12ai25** to access and earn up to 6.4 CEUs for free!

Create an account:
https://mgccc.augusoft.net

Course starts **July 1, 2024**!

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Introduction to AI: Table of Contents

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Week No	Content	Description	Learning Outcomes
1	Demystifying AI & the evolution of AI	• Course overview & orientation • What is AI? What is not AI? • Introduction to Generative AI • Demystifying AI – Automation vs AI • What Powers AI – History of integrated chips and their evolution • Initial application of AI and the motivation behind developing them • Current industry leaders	• Students will be able to distinguish between what is AI and what is not AI • Students will be able to differentiate between automation and AI • Students will be able to describe the history of AI & its origin and also the development of AI • Students will be able to identify generative AI applications
2	Emerging Technology in AI/ Emerging Trends	• AI-powered autonomous vehicles • AI powered by Big Data, IoT, and 5G technology • Impact of Generative AI on trending technologies	• Students will be able to describe the growth in AI technology by examining the development in the fields of IoT, Big Data and 5G technology • Students will be able to describe the latest developments in the field of AI and identify current trends
3	Industry 4.0 - Digitalization	• What is Digitalization and its importance • AI in industry – Application of AI in Manufacturing, Healthcare, Transportation, Agriculture, Energy • Generative AI in various industries	• Students will value the need for digitalization and its connection with the future of AI • Students will be able to appreciate AI by acknowledging its application in different sectors of the industry
4	Domains of AI	• What are the three domains of AI? • Application of AI in each domain • Activities: Working demos of generative AI applications in each domain	• Students will be able to distinguish different applications of AI based on datasets • Students will be able to understand how to handle each type of dataset by taking inspiration from the applications

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Week No	Content	Description	Learning Outcomes
5,6	AI Project Cycle I & II	• What is the AI project cycle? Why is it important? • What are the different stages of the AI Project Cycle? • Generative AI in different stages of the AI project cycle • Evaluation metrics for Generative AI models	• Students will examine different stages of the AI project, which can help them execute their AI Project following the industry standards
7	Societal Impact of AI	• What is the ethical consideration while working with AI? • What is data privacy? • How can AI become inclusive and eliminate bias? • How can AI help build sustainable solutions and solve global problems? • Ethical concerns of Generative AI • Bias in Generative AI models • The rise of Constitutional AI	• Students will examine the immediate impacts of current AI practices on the society • Students be able to appreciate the ethical concerns of AI applications
8	Elements of ML	• What is the difference between ML and DL? • What are the different Machine Learning algorithms and their applications? • Generative models in ML algorithms	• Students will be able to differentiate between basic ML models and understand their applications • Students will be able to classify Supervised Learning, Unsupervised Learning and Reinforcement Learning with the help of examples

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Week No	Content	Description	Learning Outcomes
9	Elements of DL	• What is a Neural Network, and what is the inspiration behind developing them? • What are some common DL models and their applications? • Overview of Generative Adversarial Networks (GANs) and Variational Autoencoders (VAEs)	• Students will be able to deconstruct the working behind simple Neural Networks • Students will be able to outline the difference between some common DL models with the help of examples and applications
10	Data – Fuel for AI	• What is data literacy? • What is structured data and unstructured data? • What are the different methods of Data Mining? • Generative models in Data Mining • What are the different methods of data storage?	• Students will be able to classify the type of data into structured and unstructured which will help them to evaluate the quality of the data • Students will also examine different methods of Data Mining and Data Storage
11	AI/Data Science Team	• What are the different AI/data science roles? • Intersection of Generative AI concepts with various roles • Prompt Engineering in Generative AI • Who are the stakeholder when working on an AI project? • The importance of inclusivity in an AI team	• Students can describe the different roles while working on an AI project • Students will also discuss the roles played by different key stakeholders in a typical AI team

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Week No	Content	Description	Learning Outcomes
12	Tools to implement AI	• No-Code tools vs Coding tools • What are some popular No-Code and Code based AI tools, their benefits, some examples, and comparisons • Generative AI in enhancing low-code and no-code development • Low Code + Gen AI = No Code • Introduction to Bubble • Orientation to Jupyter notebook	• Students will be able to differentiate between No-Code and Code based tools for implementing AI
13	AI Project- I (Statistical Data)	• What are No-Code tools and their importance? What are the No-Code tools specific to statistical data?	• Student will be able to create a No-Code AI solution in the domain of Statistical data
14	AI Project- II (Natural Language Processing)	• What are the No-Code tools specific to NLP? • How to implement different No-Code NLP solutions? • Hugging Face Transformers for Generative AI • OpenGPT3 Playground • T5 for generative tasks	• Students will be able to create a No-Code AI solution in the domain of Natural Language Processing

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Week No	Content	Description	Learning Outcomes
15	AI Project- III (Computer Vision)	• What are the No-Code tools specific to CV? • Image synthesis with generative models (CycleGAN) • Video and image generation with generative model - RunwayML • How to implement different No-Code CV solutions?	• Students will be able to create a No-Code AI solution in the domain of Computer Vision
16	Future Possibilities of AI	• What is Quantum computing, and how it can change AI? • Hardware Acceleration for Generative AI • What is AGI? How long will it take AI to achieve it? • How can reinforcement learning change the future of AI?	• Students will be able to discuss and report the future of AI technology by understanding the trends of emerging software and hardware technology and their direct impact on development of AI

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