KIDS & TEENS FREELANCING TRAINING INSTITUTE

Artificial Intelligence Course Outline

Module 1: What is Artificial Intelligence?

- What is AI, and how is it different from regular computer programs?
- Everyday examples of AI (Siri, Alexa, self-driving cars, Netflix recommendations)
- How AI is changing the world and making life easier
- The three types of AI: Narrow AI, General AI, and Superintelligent AI

Module 2: How Do Machines Learn? (Introduction to Machine Learning)

- What is machine learning and how does it help computers "learn"?
- Types of machine learning: supervised, unsupervised, and reinforcement learning
- Fun activity: Create a simple learning model using pictures or objects
- Example: How YouTube learns your preferences to recommend videos

Module 3: Working with Data

- What is data and why do computers need it to learn?
- Collecting and using data to train an AI system
- Introduction to datasets: What is a dataset? (e.g., pictures of animals, weather data, etc.)
- Mini project: Create a simple dataset for a fun AI game (e.g., sorting colors)

Module 4: Introduction to Neural Networks

- What is a neural network?
- How neural networks work like the human brain
- The role of input layers, hidden layers, and output layers
- Fun example: How AI recognizes faces or objects in photos
- Simple activity: Teach a computer to recognize pictures of animals using a neural network

Module 5: Building Simple AI Models (Hands-on Project)

- How to create a simple AI model using beginner-friendly tools (e.g., Google Teachable Machine, Scratch AI)

- Training a model to recognize images or sounds
- How the AI model makes predictions after learning from data
- Fun activity: Build your first image recognition app

Module 6: AI in Games and Robotics

- How AI powers video games and robots
- How AI makes game characters smarter and more responsive
- Introduction to robotics: How robots use AI to navigate and make decisions
- Fun project: Build a simple AI game that adapts to player behavior

Module 7: Ethical Issues and Future of AI

- What are the ethical concerns around AI? (privacy, job automation, biases)
- Can AI ever be "too smart"?
- How can we make sure AI is used responsibly?
- How will AI impact the future? (jobs, healthcare, space exploration)

Module 8: Final Project – Create Your Own AI Game or App!

- Choose from:
  - AI-based image classifier
  - Simple AI chat bot
  - Game that adapts to user behavior using AI
- Work through each step of the project: collect data, train the model, test, and deploy
- Present your project to friends or family and explain how AI helps it work

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Bonus Materials:

- AI learning resources and kid-friendly AI tools
- Printable AI glossary and cheat sheet
- Access to beginner-level AI programming languages (like Scratch, Python for AI)
- Certificate of Completion