KIDS & TEENS FREELANCING TRAINING

Big Data & AI Course Outline

MODULE 1: What is Big Data?

- Difference between regular data and *big* data
- Real-life examples: YouTube, weather data, games
- Activity: Imagine how much data YouTube gets every hour
- Visual: "1,000,000 Lego bricks = Big Data!"

MODULE 2: How is Big Data Collected?

- Structured vs unstructured data
- Devices, apps, sensors, social media
- Activity: Create a "data diary" of one day's digital activities

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MODULE 3: How Big Data is Processed

- Data centers, cloud computing
- Tools like Google BigQuery (intro concepts)
- Story: "From Chaos to Clarity – The Data Journey"
- Simple visual: funneling raw data into charts

MODULE 4: Patterns & Predictions with Data

- How patterns are spotted in big data
- Use a spreadsheet to identify trends (games, shopping, weather)
- Mini project: Predict the most played game in a week based on data

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MODULE 5: Intro to Artificial Intelligence

- AI vs traditional programming
- Use examples: YouTube suggestions, Google Translate
- Hands-on: Train a model using Teachable Machine

MODULE 6: How Big Data Powers AI

- Data is the "fuel" for AI brains
- Case study: Self-driving cars need thousands of road images
- Activity: Match the right data with AI tasks (images for vision, words for chatbot)

MODULE 7: Data Ethics & Digital Responsibility

- What is data privacy?
- Fairness, bias, and security in AI
- Storytime: "The Curious Bot Who Didn't Understand Fairness"
- Build a "Be Fair with Data" kid pledge

MODULE 8: Final Project – AI Idea Powered by Big Data

- Pick a challenge (e.g., clean air, smart school, game recommendation)
- Plan how big data + AI solve it
- Present as poster, pitch, or simple digital prototype
- Get certified as "Big Data & AI Junior Innovator"