€TRAINING

AI App Tools

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Introduction:

This training program is designed to familiarize participants with various AI application development tools and platforms. It empowers them to effectively leverage AI technologies to build innovative applications across different domains.

Program Objectives:

By the end of this program, participants will be able to:

- Understand the fundamental concepts of AI and its application areas.

- Evaluate and select appropriate AI development tools for specific use cases.

- Develop AI-powered applications using popular AI frameworks and platforms.

- Implement best practices for deploying and scaling AI applications.

- Troubleshoot common issues encountered during AI app development.

Targeted Audience:

- Software Developers.

- Data Scientists.

- AI Engineers.

- Product Managers interested in AI technologies.

Program Outline:

Unit 1:

Introduction to AI Application Development:

- Overview of artificial intelligence and its applications.

- Key concepts: machine learning, deep learning, natural language processing.

- Introduction to AI development lifecycle.

- Case studies of successful AI applications.

- Ethical considerations in AI development.

Unit 2:

AI Development Tools and Frameworks:

- Overview of popular AI development tools TensorFlow, PyTorch, scikit-learn.

- Choosing the right framework based on application requirements.

- Hands-on exercises with basic AI models classification, regression.

- Integration with cloud AI services AWS, Azure, Google Cloud.

- Building custom AI pipelines.

Unit 3:

Building AI-Powered Applications:

- Developing AI models for specific use cases image recognition, natural language processing.

- Implementing data preprocessing and feature engineering techniques.

- Evaluating model performance and tuning hyperparameters.

- Deploying models as APIs and integrating with frontend applications.

- Managing AI model versions and updates.

Unit 4:

Scaling and Deployment Strategies:

- Scaling AI applications using containerization Docker, Kubernetes.

- Managing AI workflows with CI/CD pipelines.

- Monitoring and logging for AI applications.

- Implementing security best practices for AI deployments.

- Performance optimization for AI models.

Unit 5:

Maintenance and Optimization:

- Maintaining AI models post-deployment retraining, model versioning.

- Optimizing model performance and reducing inference latency.

- Addressing ethical considerations in AI development.

- Planning for AI application updates and enhancements.

- Collaborative AI development and teamwork strategies.