AI+ Agile Project Management Fundamentals (1 Day)

Program Detailed Curriculum

Executive Summary

The AI+ Agile Project Management Fundamentals certification provides essential skills for managing AI-driven projects using agile methodologies. This course covers key concepts of Agile project management, including Scrum, Kanban, and Lean principles, while integrating AI tools for project optimization. Learners will gain hands-on experience in creating adaptive project plans, improving team collaboration, and ensuring project success through AI-enhanced workflows. Ideal for professionals looking to lead AI projects with a modern, flexible approach, this certification equips participants with the knowledge to drive innovation and efficiency in their project management practices

Prerequisites :

- **Basic Understanding of Project Management:** Familiarity with project lifecycle and management principles.

- **Introductory Knowledge of Agile:** Awareness of agile methodologies like Scrum and Kanban.

- **Familiarity with AI Concepts:** Basic knowledge of artificial intelligence and its applications.

- **Problem-Solving Skills:** Ability to address challenges in dynamic environments.

- **Team Collaboration Experience:** Comfort working in cross-functional, collaborative teams.

Module 1

Fundamentals of AI in Agile Project Management

1.1 Advanced AI Algorithms for Agile

- **Understanding Advanced Algorithms for Dynamic Project Adjustment in Real-Time:** Learn how machine learning and deep learning models, like regression and classification, adjust project parameters in real-time based on historical and current data.

1.2 Synergy Between AI and Agile

- **Case Studies on AI-Enhanced Sprint Planning and Performance Forecasting:** Examine real-world examples showcasing AI's role in predictive sprint planning, improving resource allocation, and forecasting project success.

1.3 Case Study: AI-Enhanced Sprint Planning

- Learn how a startup leveraged AI to predict and optimize task management, reducing resource bottlenecks and improving task distribution.

Data Literacy for Agile Project Managers

2.1 Big Data in Agile

- **Advanced Techniques to Integrate Big Data Sources in Agile Project Workflows for Deeper Predictive Analysis:** Explore advanced integration techniques for Big Data to enhance predictive analysis, risk detection, and performance forecasting in Agile workflows.

2.2 Data-Driven Decision Models

- **Exploring AI-Driven Decision Models That Predict Sprint Success, Adjust Timelines Dynamically, and Recommend Prioritization Strategies:** Learn how AI-driven decision models predict sprint success, adjust timelines dynamically, and recommend strategies for prioritizing tasks and managing resources in Agile environments.

2.3 Case Study

- Examine how Amazon utilized AI and Big Data to optimize sprint planning, adjust timelines in real-time, and align backlog prioritization with customer demand and business goals.

2.4 Hands-On Simulation Exercise: AI-Driven Sprint Prediction

- Engage in a hands-on exercise to predict sprint success scores using AI-driven tools, experimenting with changes in team capacity and project scope to improve outcomes.

AI for Resource and Team Management

3.1 Predictive Resource Management

- **Using Machine Learning to Forecast Resource Demands, Optimize Scheduling, and Prevent Bottlenecks:** Learn how Machine Learning (ML) analyzes historical and real-time data to predict resource demand, optimize team schedules, and detect bottlenecks early, ensuring smooth sprint execution.

3.2 AI-Driven Agile Metrics

- **Implementing AI to Track and Predict Agile Metrics Like Velocity, Burn-Up Charts, and Team Capacity in Real-Time:** Learn how AI transforms traditional Agile metrics, such as velocity and burn-up charts, by providing real-time predictions and actionable insights to improve team performance and sprint outcomes.

3.3 Hands-On Simulation Exercise

- Build a dashboard to forecast Sprint Resource Demand vs. Capacity, flag bottleneck risks, and generate AI-driven recommendations. This hands-on exercise helps you experiment with what-if scenarios for better resource management.

3.4 Use-case

- Learn how a multinational company uses AI-driven predictive analytics to forecast resource demand, prevent bottlenecks, and optimize scheduling, resulting in smoother sprint execution and improved delivery timelines.

3.5 Case Study

- This case study illustrates how AI-driven predictive analytics helps Agile teams forecast resource shortages, detect risks early, and recommend mitigation strategies, improving delivery predictability and reducing delays.

Module 4

Predictive Analytics in Agile Project Management

4.1 Deep Learning for Predictive Modelling

- **Applying Deep Learning to Predict Agile Project Success and Risks with High Accuracy:** Learn how deep learning models predict project success and risks by analyzing complex, non-linear relationships in Agile data, providing accurate forecasts and early risk detection.

4.2 Forecasting Resource Shortages and Delays

- **Using AI to Predict Resource Shortages and Project Delays Based on Historical Data Patterns:** Learn how AI uses historical sprint data patterns to predict resource shortages and delays, helping Agile teams take preventive actions before issues arise.

4.3 Case Study

- This case study demonstrates how deep learning models were applied in a fintech startup to predict and prevent project delays, improving sprint planning and resource allocation.

4.4 Hands-on Simulation Exercise - Management Resource Shortage Forecasting

- Participate in a hands-on simulation to forecast resource shortages and project delays using AI-driven dashboards, analyzing historical sprint data and applying "what-if" simulations for better planning.

AI in Project Monitoring and Reporting

5.1 Real-Time Monitoring with AI

- **Leveraging AI Tools for Ongoing Performance Monitoring:** Discover how AI continuously analyzes real-time data to monitor Agile project performance, identify early risks, and provide actionable insights for proactive decision-making.

5.2 AI-Enhanced Reporting

- **Automating Advanced Project Reports with AI-Driven Insights into Task Status, Team Productivity, and Sprint Health:** Learn how AI enhances traditional Agile reporting by automatically generating real-time, predictive reports that combine historical trends, sprint data, and predictive insights for proactive management

5.3 Hands-On Simulation Exercise

- Engage in a hands-on simulation where learners build an interactive Agile sprint monitoring dashboard that provides real-time visibility into sprint performance, task bottlenecks, and team sentiment.

5.4 Use-case

- Examine how a large e-commerce platform uses AI to monitor sprint progress, optimize workload distribution, and detect early warning signals, leading to improved delivery predictability and stakeholder confidence.

5.5 Case Study

- This case study illustrates how Microsoft uses AI-driven real-time monitoring to detect early signs of burnout, improve team morale, and optimize resource allocation across Agile projects.

Ethics, Bias, and Regulation in AI for Project Management

6.1 Advanced Ethical Considerations

- **Advanced Ethical Dilemmas in AI for Agile Project Management:** Learn about the ethical dilemmas in AI-driven Agile project management, including transparency in decision-making and the unintended consequences of AI predictions on team behavior and performance.

6.2 Regulatory Compliance in Agile AI

- **Delving into Compliance Frameworks (GDPR & AI-Specific Regulations) and Their Impact on Agile Workflows:** Learn about key compliance frameworks like GDPR and emerging AI regulations, and how they impact the use of AI in Agile project management, ensuring responsible data handling and transparency.

6.3 Case Study

- This case study demonstrates how IBM addressed algorithmic bias in its AI-driven resource allocation system, ensuring fair and transparent decision-making in a global healthcare setting.

6.4 Hands-on

- Engage in a hands-on simulation to evaluate ethical risks and compliance issues in AI-driven resource allocation systems. Learn to audit AI decisions for bias, transparency, and GDPR compliance.

Module 7

Evaluating and Implementing AI Tools in Agile Projects

7.1 AI Tool Evaluation Framework

- **Advanced Methods for Evaluating AI Tools in Terms of ROI, Effectiveness, and Adaptability in Agile Environments:** Learn how to evaluate AI tools based on return on investment (ROI), effectiveness in addressing real Agile challenges, and adaptability to evolving team needs and project dynamics.

7.2 Change Management Strategies for AI in Agile

- **Managing Agile Transformations with AI: Continuous Learning and Iterative Adoption:** Explore how to manage the transformation of Agile environments by adopting AI incrementally, ensuring that both AI systems and teams continuously learn and adapt over time.

7.3 Hands-on Simulation Exercise

- Engage in a hands-on simulation to evaluate and compare AI project management tools based on criteria such as ROI, adaptability, and Agile workflow integration, using an interactive dashboard.

7.4 Use Case

- Examine how a multinational financial services firm used AI-powered risk prediction tools to proactively identify sprint risks and improve delivery outcomes during a digital banking transformation.

7.5 Case Study: AI-Automated Reporting and Risk Forecasting in Agile Consulting

- This case study illustrates how Accenture adopted an AI-driven reporting and risk forecasting system to streamline Agile project management, reducing manual reporting efforts and improving risk prediction accuracy

Future Trends and AI in Agile Project Management

8.1 The Future of Autonomous Project Management

- **The Future Role of AI as an Autonomous Decision-Maker in Agile Projects:** Understand how AI is evolving from decision support to autonomous decision-making, enabling Agile teams to manage risks, optimize resources, and adjust sprint plans with minimal human intervention.

8.2 AI in Remote and Distributed Agile Teams

- **Exploring How AI Can Enhance Remote Agile Teams Through Intelligent Collaboration and Real-Time Adjustments:** Learn how AI enables intelligent collaboration, optimizes communication across time zones, and makes real-time adjustments to tasks, ensuring distributed teams stay aligned and productive.

8.3 Hypothetical Case Study Inspired by Industry Trends: Autonomous Project Management with AI

- This case study illustrates how a global consulting firm adopted an autonomous AI project management system, enabling real-time risk prediction, task prioritization, and resource allocation with minimal human intervention.

8.4 Hands-on Simulation Exercise

- Engage in a hands-on simulation to optimize collaboration and task allocation for remote Agile teams. Use an AI-powered dashboard to adjust team workloads, monitor real-time progress, and improve decision-making