U09 – Personalized Learning & Development Recommendation App

Problem Statement – Build an agent that analyzes an employee's current role and responsibilities to identify skill gaps and recommend relevant technical and behavioral courses from the Learning & Development Portal. Recommendations are tailored to support ongoing growth and performance.

Design Consideration

- Use skill gap analysis to identify relevant learning needs
- Recommend targeted technical and behavioral courses from the L&D Portal
- Personalize suggestions based on role-specific requirements
- Ensure scalability for organization-wide deployment
- Provide a user-friendly interface for course recommendations
- Maintain data privacy and secure employee information

Non-Functional Requirements

- Security: Encrypt and control access to employee data.
- Performance: Web: 3s, API: 1–2s, SQL: <500ms.
- Availability: 99.9% uptime for recommendations.
- Integration: Connect smoothly with HR and L&D systems.
- User Experience: Clear, relevant, accessible recommendations.
- Compliance: Follow data privacy and usage policies.

Technology Stack

- Backend: Python/.NET, Azure Functions
- Data Storage: Azure SQL or Cosmos DB
- Machine Learning: Azure ML Services or TensorFlow
- Frontend: React or Angular (integrated with employee portal)
- APIs: Integration Learning & Development Portal
- Security: Azure AD for authentication and authorization

Outcomes

- Personalized course recommendations for each role
- Proactive skill gap identification and resolution
- Higher engagement with the L&D Portal
- Improved employee growth and performance
- Scalable for organizational growth
- Intuitive and user-friendly recommendations
- Employee data remains secure and confidential