Workshop Title:

A 3 Days (Full-day workshop, 6–7 hours per day): "AI-Driven Smart Buildings: Transforming Smart Cities"

Day 1: Foundations of Smart Cities & AI in Urban Infrastructure

Morning Session: Introduction & Context

- Overview of Smart Cities: Components and Vision
- Role of Smart Buildings in Sustainable Urban Development
- Key AI Technologies in Smart City Development: ML, IoT, Computer Vision, NLP

Afternoon Session: Data & AI Foundations

- Types of Data in Smart Buildings (IoT sensors, energy data, occupancy data)
- Data Collection, Storage, and Management (Edge vs Cloud)
- AI Basics for Smart Buildings: Predictive Analytics, Anomaly Detection

Hands-on Exercise:

- Collecting and visualizing building energy and occupancy data using AI tools

Day 2: AI Applications in Smart Buildings

Morning Session: AI Use Cases

- Energy Management and Optimization
- Predictive Maintenance for Building Systems
- Security and Access Control (Facial Recognition, Smart Surveillance)
- Environmental Monitoring (Air Quality, Noise Levels)

Afternoon Session: AI Tools & Platforms

- AI & IoT Integration: Platforms like Azure IoT, AWS IoT, or Google Cloud AI
- Building Management Systems (BMS) & AI-enabled Dashboards
- Digital Twin of Smart Buildings: Concept and AI Implementation

Hands-on Exercise:

- Building a predictive model for energy consumption or occupancy patterns
- Creating a basic dashboard for real-time building monitoring

Day 3: Advanced AI & Smart City Integration

Morning Session: Advanced AI & Optimization

- Reinforcement Learning for HVAC & Lighting Systems
- AI-driven Demand Response & Renewable Energy Integration
- Edge AI vs Cloud AI for Smart Buildings

Afternoon Session: Smart City Integration & Future Trends

- Integrating Smart Buildings into City-wide AI Systems
- Traffic, Mobility, and Urban Planning Applications
- AI Ethics, Data Privacy, and Security in Smart Cities
- Case Studies: Successful Smart Building Projects

Hands-on Exercise:

- Scenario-based simulation: Optimizing building energy and resource usage in a smart city context
- Group discussion: Designing a mini AI-powered smart building solution

Deliverables & Outcomes

Participants will:

- Understand AI applications in smart buildings and urban planning
- Learn to implement AI models for energy, security, and maintenance optimization
- Gain hands-on experience with AI tools and IoT integration
- Develop mini-projects integrating AI solutions for smart city scenarios

Target Audience:

- Smart city planners & urban developers
- Architects and civil engineers
- AI/ML engineers & data scientists
- Facility and building management professionals

Instructor: Mr Suresh Tripathi is a founder of Geosun Pty Ltd an Australian company registered in year 2000 to provide AI corporate training, data center solutions and data pipeline end-to-end cloud platform. He has nearly 25+ years of work experience in digital data analytics integrated with AI and tech platforms. His education qualifications include master degree in Statistics from India, master degree in Geostatistics from Australia and master degree in Geoscience from Australia. He completed his AI certificate courses from Stanford Business School from California and High Impact Leadership from Cambridge University, UK. He has worked in Australia and US focusing his career on data strategy, tech platforms, and developing in-house training. He has worked with range of industries in Australia and US that include Deloitte, Flybuys, Ambulance Victoria, CFA (Emergencies Services), Avexa, Covance, Avance Clinical (Pharmaceuticals), Intelligen, Commonwealth Bank, Hackett Group (US), Health and Safety Sphera Solutions(US), Vic Government (Environment, water and energy), Waste Management (US), Outfront Media (US), Adani Mining (Australia) and Fura Gems Industries (Dubai).

Fee: Rs 50,000 per participant plus GST payable to GeosunAI Tech Cloud Pvt Ltd. RTGS/Cheque/ PhonePe via below link form.

Bank: Punjab National Bank

Account Name: NB, GeosunAI Tech Cloud Pvt Ltd

Account No.: 1228102100001295