
A 3 day workshop on Logistics

Day 1: Introduction to AI in Logistics

Objective: Understand AI fundamentals and its relevance to logistics.

Sessions:

1. **Welcome & Workshop Overview** (30 min)
 - Introductions, objectives, and expected outcomes.
2. **Overview of Logistics & Supply Chain Management** (1 hr)
 - Key challenges in logistics: cost, efficiency, delivery, demand forecasting.
 - Current trends: automation, digital transformation, and AI adoption.
3. **Introduction to AI & Machine Learning** (1.5 hr)
 - Basics of AI, ML, and Deep Learning.
 - AI workflow: data collection → model building → deployment → monitoring.
4. **Break** (15 min)
5. **AI Use Cases in Logistics** (2 hr)
 - Route optimization & fleet management
 - Demand forecasting & inventory management
 - Warehouse automation & robotics
 - Predictive maintenance of vehicles
6. **Case Study & Group Discussion** (1 hr)
 - Example: How DHL/UPS uses AI for predictive logistics and efficiency improvement.

Q&A & Wrap-Up (15 min)

Day 2: AI Techniques and Tools in Logistics

Objective: Learn AI techniques, tools, and data management practices for logistics optimization.

Sessions:

1. **Data in Logistics** (1 hr)
 - Types of logistics data: shipment data, sensor data, GPS, ERP data.
 - Data quality, integration, and preprocessing for AI models.
2. **Machine Learning Techniques for Logistics** (2 hr)
 - Supervised vs. unsupervised learning.
 - Forecasting demand using regression and time-series models.
 - Clustering for route optimization and warehouse layout.
 - Anomaly detection for fraud or shipment delays.
3. **Break** (15 min)
4. **AI Tools & Platforms** (1.5 hr)
 - Python, R, TensorFlow, PyTorch, and AI logistics platforms.
 - Overview of AI-powered supply chain software (Llamasoft, ClearMetal, Oracle SCM).
5. **Hands-on Exercise: Predictive Demand Forecasting** (2 hr)
 - Build a simple ML model using historical shipment data.
 - Interpret model output and metrics.
6. **Discussion & Q&A** (30 min)

Day 3: Advanced Applications, Integration & Future Trends

Objective: Apply AI to real logistics problems and explore future trends.

Sessions:

1. **AI in Route Optimization and Fleet Management** (1 hr)
 - AI algorithms: Dijkstra, A*, genetic algorithms, reinforcement learning.
 - Case study: Last-mile delivery optimization with AI.
2. **AI in Warehouse Automation & Robotics** (1 hr)
 - AI-powered picking, packing, and inventory tracking.
 - Use of computer vision and autonomous vehicles in warehouses.
3. **Break** (15 min)
4. **Integration of AI into Supply Chain Systems** (1.5 hr)
 - ERP, WMS, TMS integration with AI models.
 - Real-time monitoring and predictive dashboards.
5. **Hands-on Exercise: Route Optimization Simulation** (2 hr)
 - Use sample dataset to optimize delivery routes with AI.
 - Compare results with traditional routing methods.
6. **Future Trends & Emerging AI Technologies in Logistics** (1 hr)
 - Blockchain & AI integration for supply chain transparency.
 - AI-driven autonomous shipping and drones.
7. **Group Presentations & Closing Remarks** (1 hr)
 - Teams present solutions from hands-on exercises.

Feedback and next steps for applying AI in real-world logistics

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 25,000 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

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