**Indira College Of Engineering and**

**Management, Pune**

**Department of MCA**

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MODULE 1: Introduction to Business Intelligence and Power BI

Task 5: Manufacturing Quality Control Monitoring Use Power BJ data sources to integrate loT sensor data from factory machines, analyze defect rates, and optimize production processes

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Timestamp** | **MachineID** | **ProductLine** | **Temperature\_C** | **Vibration\_Level** | **ProductionCount** | **DefectCount** | **DefectRate** | **OperatorID** | **Shift** | **MaterialBatch** | **MachineStatus** | **EnergyConsumption\_kWh** |
| ######## | M004 | LineD | 98.61 | 1.62 | 193 | 13 | 0.01 | O102 | Evening | BatchB | Idle | 100.53 |
| ######## | M005 | LineC | 84.28 | 0.71 | 146 | 1 | 0.2 | O102 | Night | BatchA | Idle | 132.65 |
| ######## | M003 | LineD | 71.04 | 2.39 | 173 | 1 | 0.09 | O102 | Night | BatchD | Running | 82 |
| ######## | M005 | LineC | 71.85 | 1.25 | 119 | 5 | 0.06 | O102 | Morning | BatchB | Maintenance | 139.55 |
| ######## | M005 | LineD | 66.61 | 2.2 | 142 | 2 | 0.18 | O101 | Morning | BatchD | Idle | 88.92 |
| ######## | M002 | LineA | 60.63 | 4.44 | 52 | 12 | 0.15 | O104 | Morning | BatchC | Maintenance | 51.08 |
| ######## | M003 | LineD | 76.94 | 1.76 | 197 | 8 | 0.19 | O102 | Evening | BatchB | Maintenance | 140.54 |
| ######## | M003 | LineC | 75.8 | 0.79 | 196 | 3 | 0.07 | O102 | Evening | BatchB | Running | 59.13 |
| ######## | M003 | LineC | 71.74 | 1.91 | 139 | 0 | 0.11 | O103 | Morning | BatchC | Idle | 81.93 |
| ######## | M005 | LineB | 60.56 | 4.55 | 196 | 3 | 0.11 | O102 | Night | BatchB | Running | 145.01 |
| ######## | M004 | LineA | 67.95 | 1.51 | 197 | 0 | 0.2 | O103 | Evening | BatchD | Idle | 145.06 |
| ######## | M003 | LineD | 88.45 | 3.31 | 145 | 13 | 0.02 | O104 | Evening | BatchA | Idle | 107.34 |
| ######## | M005 | LineB | 91.61 | 0.2 | 101 | 4 | 0.06 | O101 | Evening | BatchD | Idle | 113.18 |
| ######## | M002 | LineD | 84.24 | 1.89 | 177 | 3 | 0.04 | O101 | Morning | BatchA | Idle | 94.84 |
| ######## | M004 | LineD | 97.05 | 1.66 | 88 | 7 | 0.05 | O104 | Morning | BatchA | Idle | 79.32 |
| ######## | M002 | LineB | 86.04 | 0.99 | 131 | 7 | 0.1 | O101 | Morning | BatchD | Maintenance | 82.87 |
| ######## | M004 | LineB | 96.6 | 2.76 | 153 | 6 | 0.07 | O104 | Morning | BatchD | Running | 117.25 |
| ######## | M005 | LineB | 94 | 2.53 | 178 | 2 | 0.08 | O104 | Morning | BatchD | Maintenance | 125.24 |
| ######## | M001 | LineB | 77.98 | 3.52 | 60 | 0 | 0.17 | O104 | Night | BatchD | Idle | 129.16 |
| ######## | M004 | LineB | 63.82 | 1.49 | 91 | 0 | 0.19 | O101 | Night | BatchC | Running | 128.96 |
| ######## | M002 | LineD | 74.83 | 1.37 | 148 | 11 | 0.01 | O103 | Morning | BatchB | Idle | 59.12 |
| ######## | M005 | LineB | 86.75 | 1.01 | 56 | 10 | 0.04 | O104 | Evening | BatchA | Running | 99.44 |
| ######## | M004 | LineA | 86.64 | 1.25 | 193 | 2 | 0.13 | O102 | Morning | BatchD | Maintenance | 55.76 |
| ######## | M001 | LineC | 83.65 | 2.88 | 139 | 5 | 0.07 | O101 | Night | BatchD | Running | 104.95 |
| ######## | M001 | LineB | 70.99 | 2.14 | 161 | 6 | 0.05 | O104 | Night | BatchD | Running | 94.15 |
| ######## | M003 | LineB | 82.45 | 0.51 | 109 | 5 | 0.06 | O104 | Evening | BatchC | Running | 138.77 |
| ######## | M003 | LineD | 75.32 | 1.42 | 162 | 13 | 0.06 | O102 | Night | BatchD | Running | 85.09 |
| ######## | M002 | LineB | 98.87 | 1.39 | 51 | 13 | 0.17 | O103 | Morning | BatchD | Running | 61.71 |
| ######## | M004 | LineB | 93.96 | 3.54 | 178 | 5 | 0.03 | O103 | Evening | BatchD | Idle | 64.3 |
| ######## | M004 | LineB | 88.87 | 3.62 | 97 | 5 | 0.14 | O103 | Morning | BatchB | Running | 126.15 |
| ######## | M003 | LineD | 69.44 | 0.91 | 189 | 12 | 0.11 | O104 | Morning | BatchC | Running | 111.82 |
| ######## | M004 | LineB | 70.24 | 4.99 | 86 | 2 | 0.06 | O104 | Evening | BatchD | Maintenance | 60.11 |
| ######## | M004 | LineC | 61.62 | 1.48 | 58 | 5 | 0.08 | O104 | Morning | BatchA | Running | 58.41 |
| ######## | M001 | LineD | 88.43 | 4.89 | 148 | 7 | 0.05 | O101 | Night | BatchA | Maintenance | 120.1 |
| ######## | M003 | LineC | 64.44 | 2.17 | 196 | 10 | 0.12 | O102 | Morning | BatchA | Idle | 57.28 |
| ######## | M005 | LineD | 77.57 | 0.36 | 97 | 10 | 0.02 | O104 | Evening | BatchC | Running | 132.19 |
| ######## | M003 | LineB | 68.07 | 1.86 | 180 | 1 | 0 | O102 | Evening | BatchC | Maintenance | 120.62 |
| ######## | M005 | LineC | 95.83 | 3.24 | 197 | 4 | 0.13 | O102 | Evening | BatchA | Maintenance | 58.13 |
| ######## | M001 | LineD | 79.01 | 3.47 | 103 | 13 | 0.04 | O103 | Morning | BatchD | Idle | 58.48 |
| ######## | M002 | LineA | 82.53 | 2.75 | 169 | 0 | 0.01 | O101 | Evening | BatchC | Running | 148.66 |
| ######## | M004 | LineB | 87.82 | 2.35 | 165 | 11 | 0.08 | O104 | Evening | BatchA | Running | 87.43 |
| ######## | M001 | LineD | 65.57 | 2.85 | 124 | 14 | 0.01 | O103 | Morning | BatchA | Maintenance | 87.06 |
| ######## | M004 | LineA | 84.18 | 3.04 | 162 | 0 | 0.18 | O103 | Night | BatchD | Running | 131.28 |
| ######## | M002 | LineD | 81.59 | 0.59 | 153 | 4 | 0.01 | O104 | Morning | BatchB | Maintenance | 144.72 |
| ######## | M002 | LineA | 68.12 | 1.97 | 133 | 11 | 0.12 | O102 | Evening | BatchC | Running | 148.6 |
| ######## | M001 | LineB | 97.71 | 1.36 | 161 | 12 | 0.09 | O103 | Evening | BatchD | Maintenance | 125.34 |
| ######## | M002 | LineC | 83.95 | 4.06 | 148 | 2 | 0.13 | O102 | Morning | BatchA | Running | 87.63 |
| ######## | M005 | LineA | 87.79 | 2.46 | 142 | 3 | 0.07 | O101 | Night | BatchA | Idle | 58.35 |
| ######## | M002 | LineD | 95.22 | 4.92 | 195 | 2 | 0.03 | O102 | Evening | BatchD | Running | 127.71 |
| ######## | M004 | LineB | 84.97 | 2.11 | 177 | 0 | 0.2 | O101 | Evening | BatchC | Running | 105.84 |

