# Industry 4.0 and Open Source Projects

### use of these frameworks can build complete lloT ecosystem

#### Eclipse Kapua



Modular IoT cloud platform to manage and integrate devices and their data. A solid integrated foundation of IoT services for any IoT application.

- platform for IoT devices and smart sensors.
- 2 Management of edge IoT nodes .
- 3 Data Aggregation for analysis purpose
- Web Console for management
- 5 REST Api are available

- 1/O Services
- 2 Data Services
- 3 Cloud Services
- Configuration & Remote Management
- 5 Networking and Watchdog
- 6 Web administration interface





IOT Gateway provides or, when available, aggregates open source implementations for the most common services needed by M2M applications.

### Eclipse Millo



OPC Unified Architecture is an interoperability standard that enables the secure and reliable exchange of industrial automation data while remaining crossplatform and vendor neutral.

- Supports (1.03) of the UA specifications.
- 2 compliant UA client and server applications.
- interface between Clients and Servers
- access to real-time data
- 5 monitoring of alarms and events
- 6 historical data access
- data modelling

- Low-Code Engine
- Browser-based flow editing
- Built on Node.js
- Social Development
- Run Locally, On SBCs and Cloud

#### Node-RED



Node-RED is a programming tool for wiring together hardware devices, APIs and online services in new and interesting ways.

# it covers IIoT Platform, IoT Gateway, OPC-UA Implementation and Connector

Have a great

day ahead.

Thank you!

contact me for your
questions and queries

#### <u>Aniruddha Kudalkar</u>

#### aniruddha.kudalkar@gmail.com +91 9607352625