Reduce hardware costs in Internet of Things using Python
An electronics teacher’s perspective

Global IoT market valued at 1 Trillion US Dollar by 2026 [1]
How to develop systems which are real world and need less hardware
Compute on cloud instead on the hardware.
Collect data if already available online.

Cloud Computing and Web Services
Processed Data/Online Info/WebHooks/API calls
- Cloud Storage
- Web Services

Image/Video/Location/Sensors Data
Hardware with sensors and actuators

Case Study 1:
Train Location tracking using Python instead of GPS/GSM

Indian Railways Website
Unmanned Railway Crossing Alert and Gate Control

Case Study 2:
Weather Monitoring System using Python instead of Sensors

Indian Meteorology Website
Weather info for Agriculture
Hailstorm/Cyclone Alert

Deploy Python Apps on Cloud with CI/CD, ML and DBMS capabilities
- Access to port settings through Python properties.
- Support for different byte sizes, stop bits, parity
- Flow control with RTS/CTS and/or Xon/Xoff.
- Working with or without receive timeout.
- File like API with “read” and “write”
- URL Handlers

Basic Hardware Setup
With Serial Port or Wireless Connectivity

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