An IoT System for Environment Monitoring

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1 Background

Smart farming requires precision controlled environments for crops to grow efficiently. We've developed a system that monitors key environment parameters such as temperature, humidity and CO_2 levels that help researchers and farmers in decision making and managing an indoor grow room.

4 Conclusion

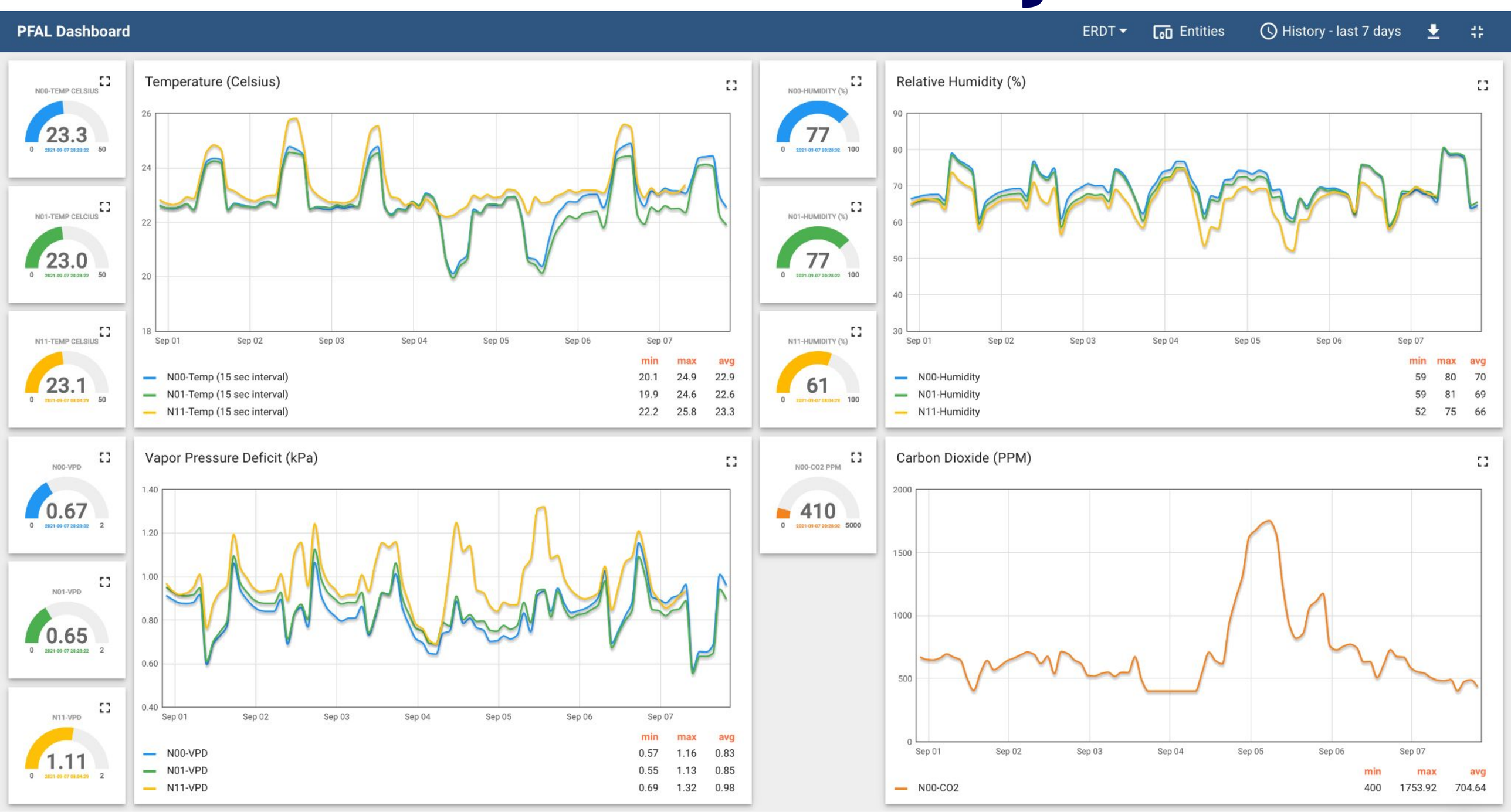
An IoT system for environment monitoring has been designed and synthesized to monitor key environmental variables. Information from the dashboard based on the sensor telemetry can be used to correct or optimize crop growing conditions possibly resulting in improved production efficiency.

5 Future Work

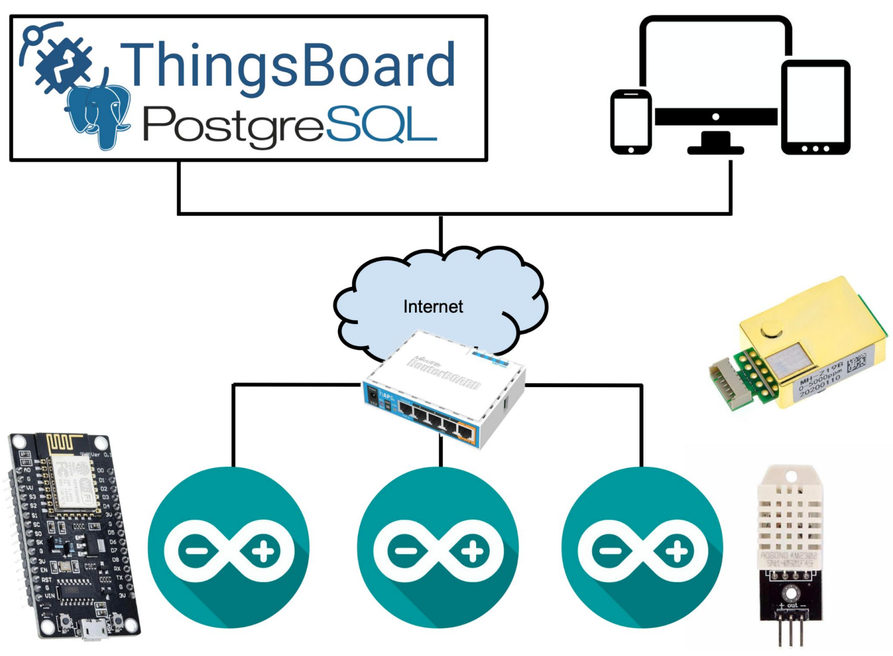
Automate control of environment in response to real time data/telemetry. Schedule control via a website e.g. Lighting, AC system, Irrigation schedule is controlled from a single website or is triggered by events. Develop an automated system for growing **Medicinal Cannabis**

3 Results and Discussion

Monitor crop #**environment** real-time & Visualize #**telemetry** #**data**



2 Methods



High-Frequency Data Collection

- Sensors read and send data at a 15- second interval. Telemetry can be averaged as needed

Real-Time Data Visualization

- Data is graphed as it is sent real-time
- Historical data can be viewed from the start of collection until the most recent recorded telemetry. It can also be viewed with custom date and time ranges

Alerts and Notifications

- Get email notifications when environment parameters are beyond defined thresholds

Develop without breaking the bank

- The system is developed using arduino-based components and cloud technologies so you can get going with very minimal cost

Scan to view the IoT dashboard online
https://pfal.rjignacio.com
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