



datathon
@UOM 2023

Datathon

Pitch Deck

ML Lizards

The Team



Ευθυμίου Βασίλειος

Εκπαίδευση Μοντέλων



Παπαδόπουλος Νίκος

Ανάπτυξη Smart Contract



Τζελαλής Γεώργιος

Αναζήτηση Πηγών

και

Ανάλυση Δεδομένων



Τσώνη Σταυρούλα

Αναζήτηση Πηγών

και

Ανάλυση Δεδομένων

Management of Surplus Energy

The project addresses global challenges associated with climate change, resource depletion, and the need for sustainable energy solutions. By merging ML, Solidity, and blockchain, it introduces an innovative model that empowers individuals, promotes green energy adoption, and contributes to building a more resilient and environmentally conscious society.

Decentralized Energy Trading Platform

Objective

The platform, by facilitating decentralized energy trading of renewable resources, helps in managing power resources more efficiently.

Scope:

1. Promote the use of renewable energy sources, such as solar or wind power, to reduce reliance on traditional, environmentally harmful energy sources.
2. Contribute to environmental sustainability by creating a decentralized energy market that prioritizes clean and renewable energy.

Key Features:

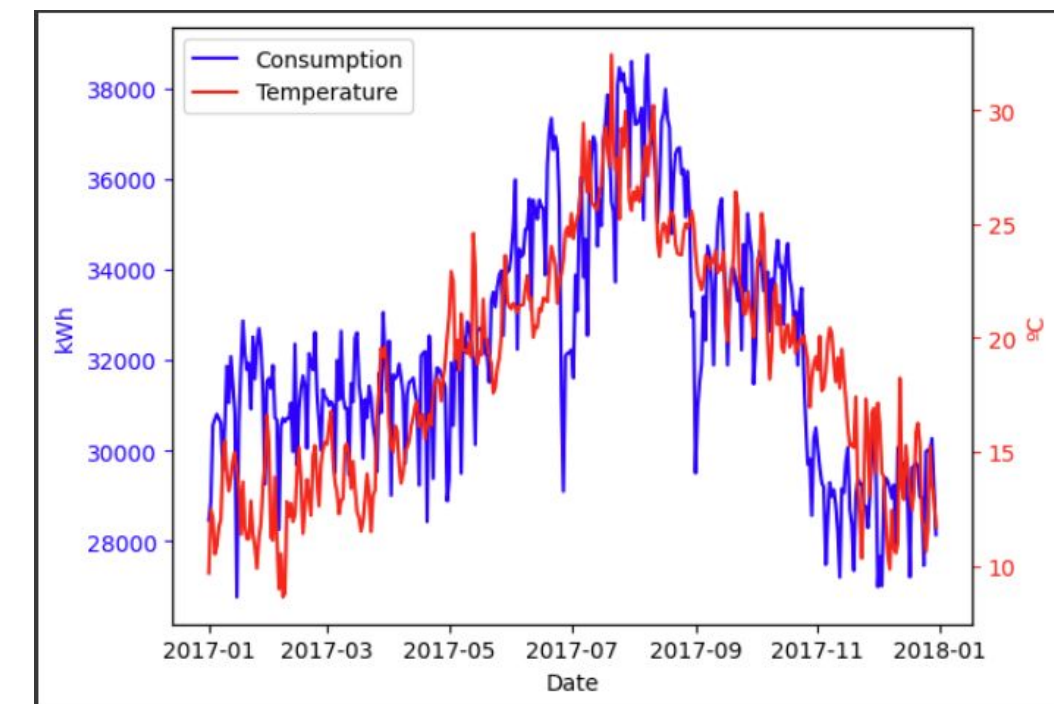
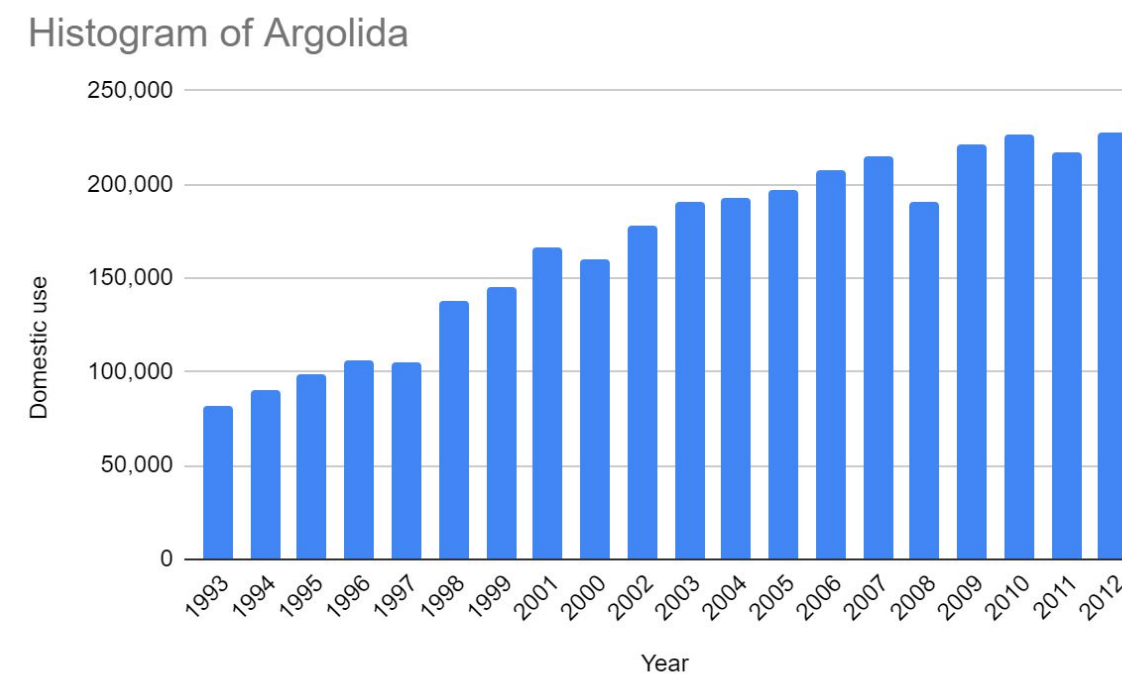
The proposed platform is unique and impactful in fostering decentralized, sustainable, and transparent energy management practices

Technologies Used:

The project is a combination of Machine Learning, Solidity-based Smart Contracts and Blockchain.

Milestones, Methodologies & Challenges

1. Research and Analysis
2. Integration of Machine Learning Models
3. Development of demo Smart Contract



Technical Excellence

User Experience

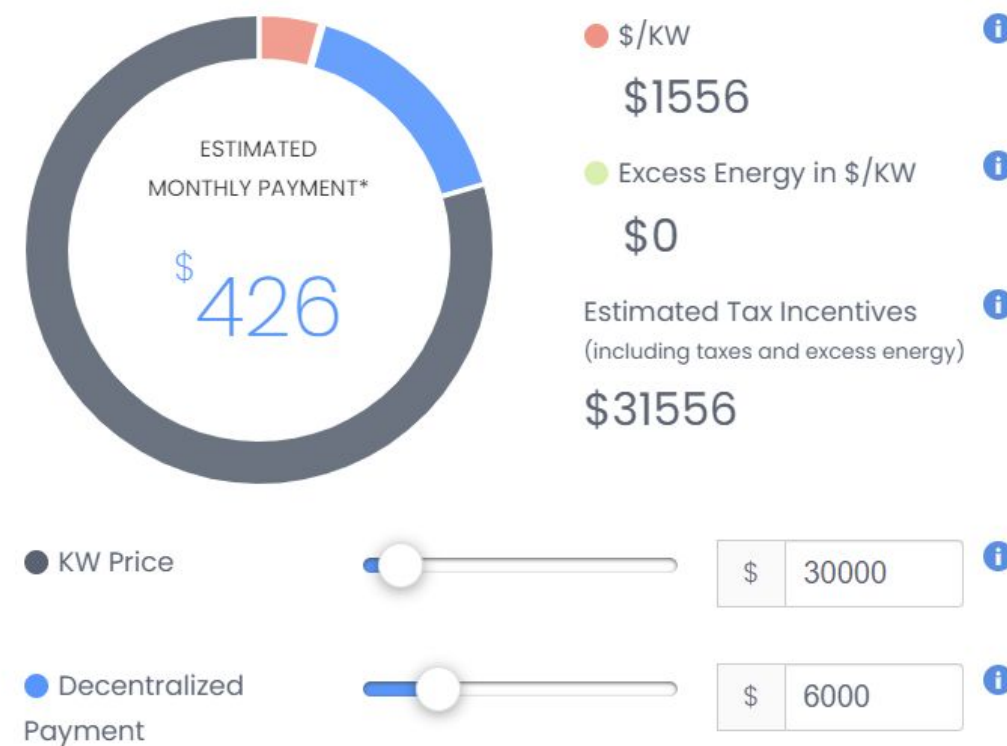
Personalized Dashboards:

The user has statistics on surplus energy production.

The user has offers from the market from multiple suppliers.

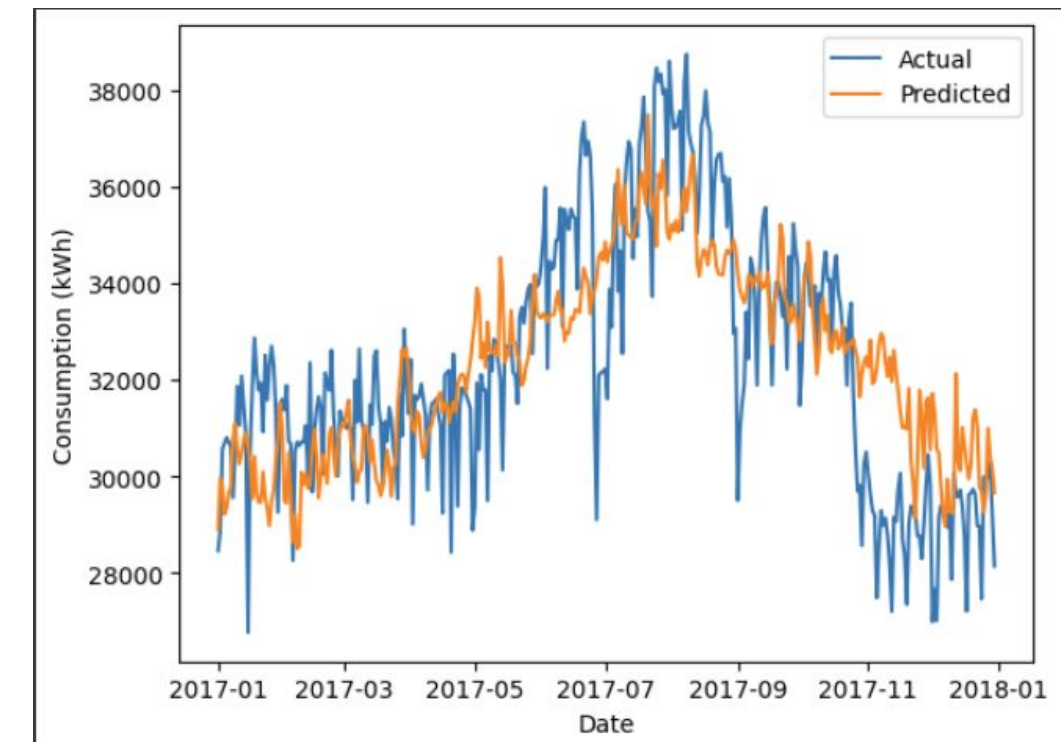
DECENTRALIZED ENERGY TRADING PLATFORM

Estimate your monthly consumption and excess energy



Unique Features

1. Peer-to-Peer Renewable Energy Trading
2. Machine Learning Energy Consumption Prediction



Technical Excellence

Data Utilization

ΕΛΣΤΑΤ

Energy Consumption of households over the years

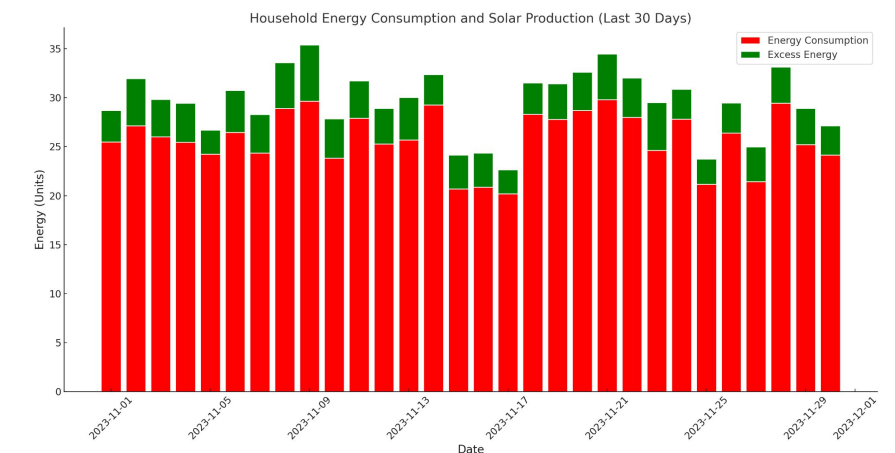
Kaggle

Data Pre-process

Data Training (Polynomial Regression Analysis & Linear Regression)

Result

Decentralized use of surplus renewable energy among households



Next Steps & Further Dev

Future Development:

- Metrics

- Better Models - Hyperparameter Tuning

- Complete Smart Contracts


Collaborations:

- Mandatory use of power grid

A large, flowing abstract shape in shades of blue and purple is positioned on the left side of the slide.

Thank you!

Contact Us.

- ✉ ics21035@uom.edu.gr
 - ✉ ics21048@uom.edu.gr
 - ✉ ics21032@uom.edu.gr
 - ✉ ics21074@uom.edu.gr
- 
- A large, flowing abstract shape in shades of pink and purple is positioned on the right side of the slide.