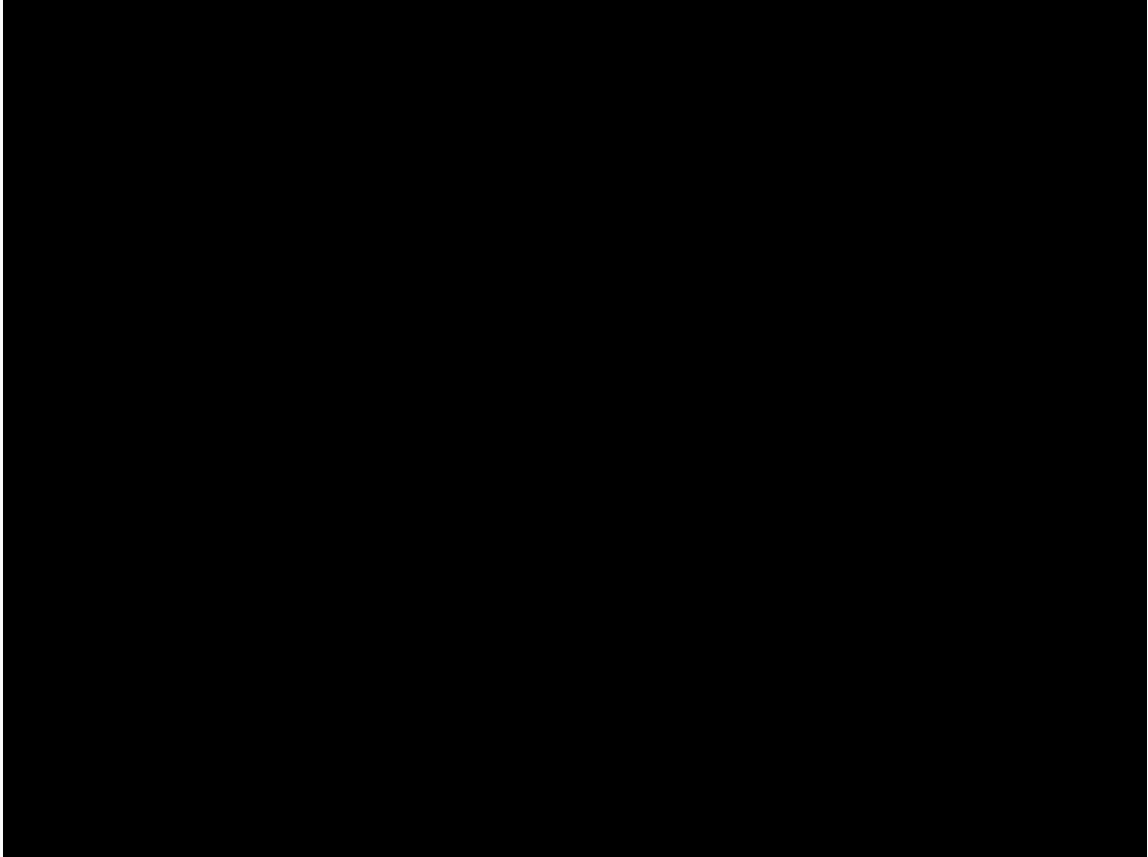




SmartAgro

Improving agriculture, Improving lives

The Tragic Situation





SmartAgro

Improving agriculture, Improving lives



Indebted farmer commits suicide

(Sep, 2017 - hirunews.lk)

Rice imports continue despite bumper harvest

(Feb, 2018 - The Sunday Times)



Failure of crops,

- Lack of proper fertilization
- Natural Disasters
- Crop Epidemics

Wrong decisions,

- Lack of data for the government

Agriculture is a big deal!



In Sri Lanka,

18% of GDP

31.8% of population

Source: [wiki/Agriculture_in_Sri_Lanka](https://www.wikipedia.org/wiki/Agriculture_in_Sri_Lanka)

GDP contribution in 2016,

Nepal	- 33%
Cambodia	- 26.7%
Pakistan	- 24.6%
India	- 17.4%
Bangladesh	- 14.8%
Indonesia	-14%
Malaysia	- 8.7%

Source: World Bank





A platform that offers historical data of crops,

A platform where **failure of crops can be identified,**

- **Easily**
- **Proactively**

Prevention is better than cure!!!



IOT



**BIG
DATA**



**IOT +
BIG DATA**



NB-IoT Sensor Network - For ground monitoring

Satellite Imagery - For aerial monitoring

Big Data Analytics - To connect the dots



From the device,

- Water level
- Surface Temperature

From satellite imagery

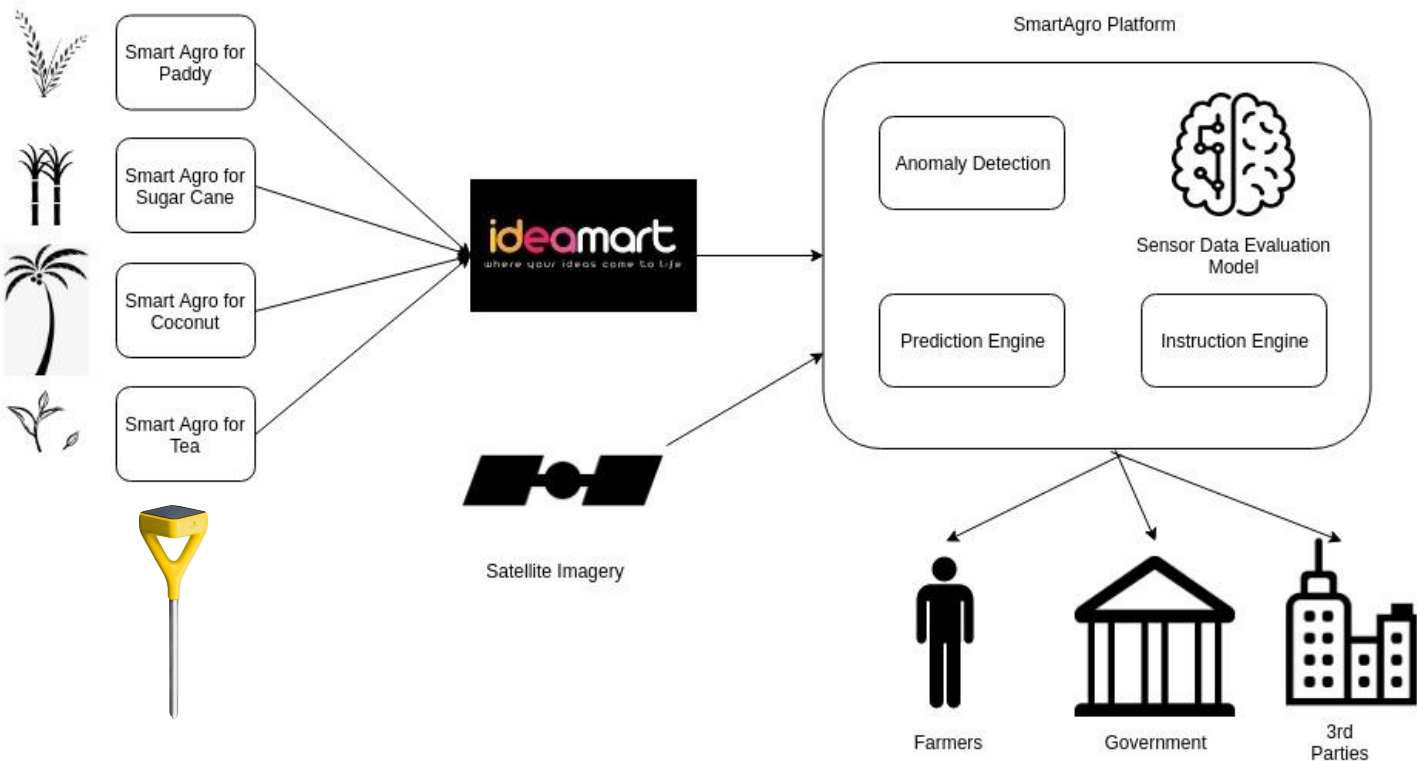
(United States Geological Survey),

- Greenness (Amount of Nitrogen)

Zoomed Paddy Map



High Level Design





Security,

- Place device in the middle of the paddy field
 - Hard to reach
- GPS tracking

Power supply,

- Batteries can be replaced every 2 years



The Device,

- Ministry of National Policies and Economic Affairs
- Ministry of Agriculture

The Data,

- Government
 - Import/Export decisions
- Mass scale farmers
 - Investment decisions
 - Early detection of risks
- Financial Institutes
 - To offer loans
- Insurance companies
 - To value the premium



- We provide unique information
- First in the South Asian Region

Similar Product,

<https://descarteslabs.com/search.html>

But this only offers information through satellite data!!



- Integration with Govi Mithuru
 - For small scale farmers
- Customize the device for other crops
 - Coconut, Tea, Rubber etc.
- Expansion in South, South-East Asia
 - With the support of Axiata Group



Thank You!



Wishmitha Mendis
UI/UX Engineer



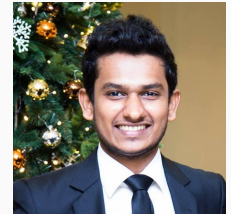
Rajith Bhanuka
Business Development &
PR



Adheesha Jayasuriya
Backend Developer



Viran Malaka
Backend Developer



Isuru Dharmadasa
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Q & A



Wishmitha Mendis
UI/UX Engineer



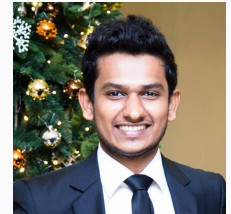
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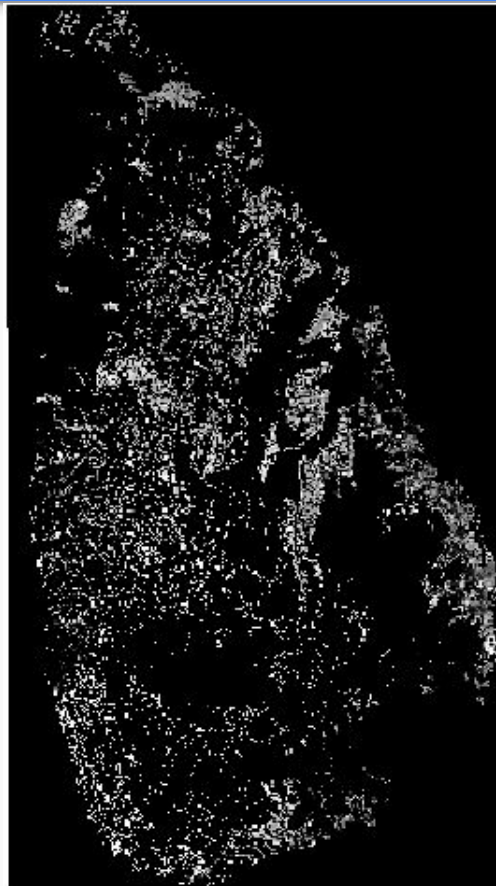


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Preprocessed Satellite Image





SmartAgro

Farmer Jones

YOUR CULTIVATIONS

Paddy Field

Dashboard

Analytics

Coconut Grove

Dashboard

Analytics

Tea Plantation

Dashboard

Analytics

Dashboard

Paddy Field

Location

Weather

Colombo

Saturday 5:00 PM

Partly Cloudy

29°C | °F

Precipitation: 67%

Humidity: 80%

Wind: 14 km/h

Low

Water Level

Good

PH

High

Temperature

Good

NPK



YOUR CULTIVATIONS

- Paddy
- Tea
- Rubber

Harvest



Devices



Devices

Device AMAK001

Water Level	Low
Ph	Good
Temperature	High

Device AMAK002

Water Level	Low
Ph	Good
Temperature	High

Device AMAK003

Water Level	Low
Ph	Good
Temperature	High

Device AMAK004

Water Level	Low
Ph	Good
Temperature	High



Water level Sensor	120.00
Soil moisture Sensor	150.00
Temperature Sensor	310.00
Total Cost	580.00

Prototype Cost = **(NB IoT Board cost + 580) /=**