esri Indonesia

ArcGIS solutions for GeoAI

Discover how Esri's GIS solutions deliver advanced mapping and spatial analytics

GeoAI applies spatial machine learning and deep learning techniques to help you solve complex problems and derive deeper insights in innovative ways. Use large collections of images and leverage vast computing power to speed up your feature extraction tasks such as finding impervious surfaces, identifying segments, and classifying imagery.

Solutions for GeoAI

- Extract Location Insights from Unstructured Text
- Location Recommendation
- Customer Segmentation
- Accident Risk Prediction
- Traffic Accident Management
- Automation Forest Fire Detection

- Demand Prediction and Network Planning
- Intelligence Pest Detection
- GeoAI Palm Oil Production Information System
- Land Cover Change Detection
- Resin Tree and Teak Tree Detection & Analysis
- Wood Detection and Analysis with GeoAI

To learn more about ArcGIS solutions call our product specialists.

Call us on **(021) 2709 9881-84**

Extract Location Insights from Unstructured Text

Named Entity Recognition is used to extract data from a text which can be event location, time, event type, etc. After the data is obtained, spatial and temporal analysis is carried out to answer which areas are prone to crime and natural disasters and how many events occur.

- Develop a Natural Language Processing (NLP) model for the extraction of crime and natural disaster data from the Twitter social media platform.
- Send alerts to ArcGIS when there is an accident
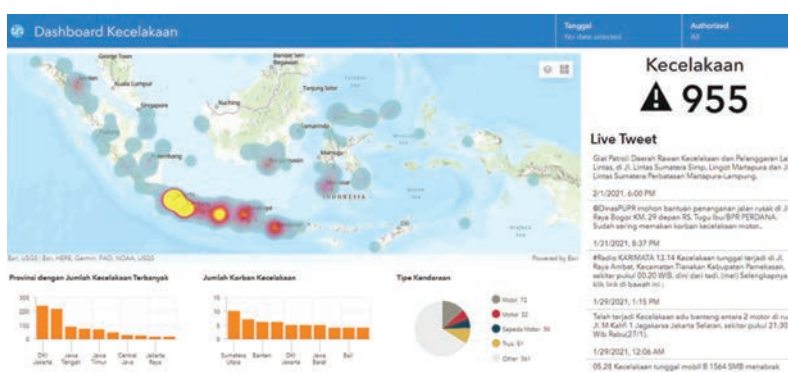
Inventory Management Dashboard shows business insights, updated status and report from block to a tree level.

Location Recommendation

This solution has a recommendation algorithm to filter the best location based on user preferences. The algorithm can select the best location based on many parameters, such as POI, demographics, GDP, etc. This solution uses skyline algorithm to recommend the best location. This solution can be used for site selection in retail, banking, and other industries.

- Integrate data from many sources
- Develop a recommendation system to select the best location
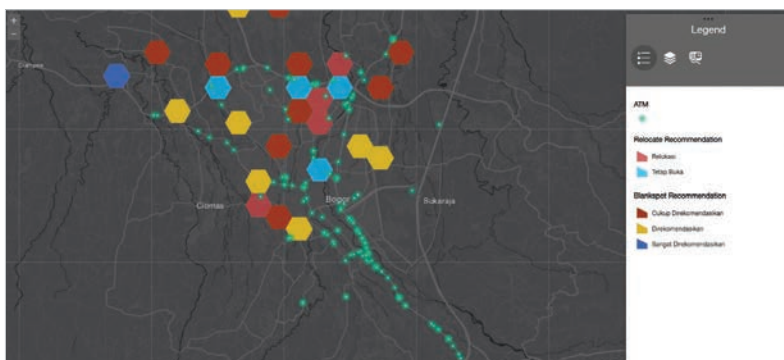
Example case: Location recommendation for banking (ATM)

Customer Segmentation

Combine spatial and non-spatial attributes and use machine learning algorithms and spatial analysis techniques to group customers based on their behaviour. Map various types of customers for decision makers to decide whether an area has potential or not.
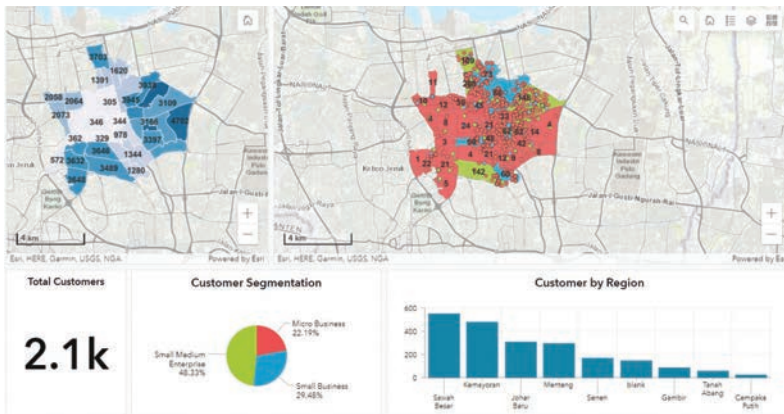
Example case: Customers Segmentation based on business type

Accident Risk Prediction

Monitor accident risks on toll roads. With historical accident data and weather data use machine learning algorithms to predict whether a road has a high or low risk. This prediction also provides future time prediction, so operators can prevent more serious accidents on the road.
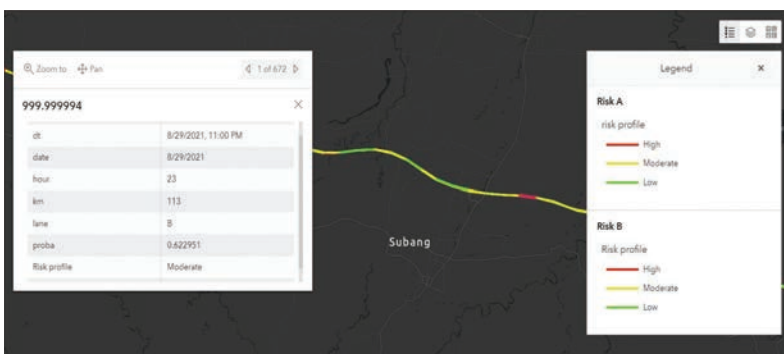
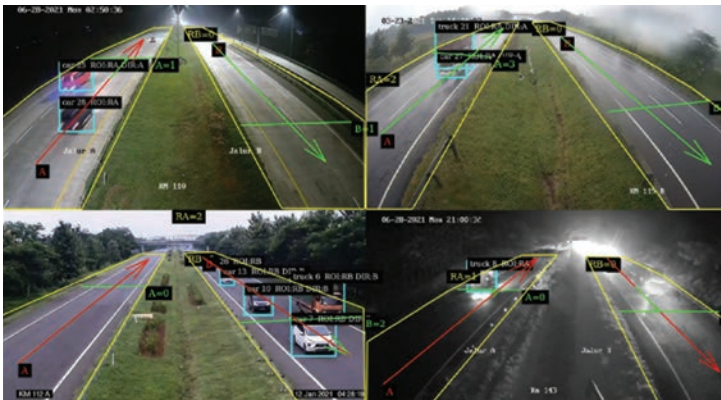Dashboard for accident risk prediction on toll roads using machine learning algorithm.

Traffic Accident Management

This solution is used for helping TMC (Traffic Management Control) to make decisions and give orders to patrol officers in the field.

Traffic Accident Management implementation on highways.

Traffic Management Centre (TMC) Dashboard

Products

- ArcGIS Enterprise including dashboard
- ArcGIS Online
- Workforce
- Survey 123
- Image Analyst (license)

Required data

- Tweet
- Access CCTV realtime

Automation Forest Fire Detection

Identify hotspots in forest or plantation areas in Indonesia and validate whether the fire area is still active or not.

Dashboard to show fire spots in forest.

Products

- ArcGIS Desktop Advanced (Spatial Analyst, Image Analyst)
- ArcGIS Enterprise (Image Server, Notebook Server)

Required data

- Data hotspot from NASA
- Imagery Sentinel L2A from sentinel Hub

Demand Prediction and Network Planning

This solution detects building counting and footprint extraction for predicting and mapping potential demand that drives sales.

Building footprint counting and extraction
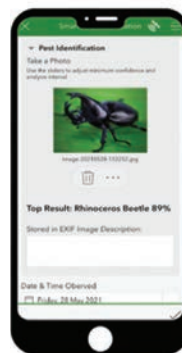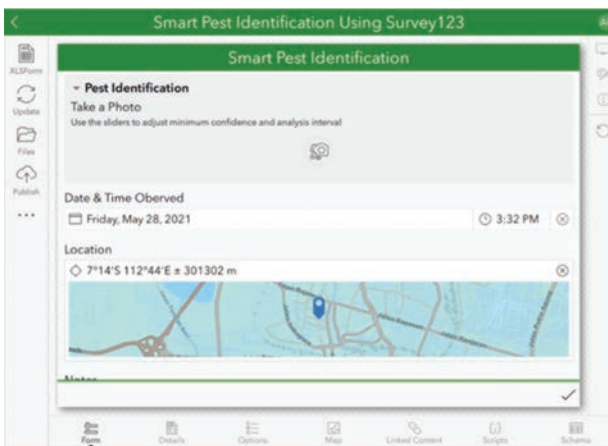

Settlement mapping and area calculation

Intelligent Pest Detection

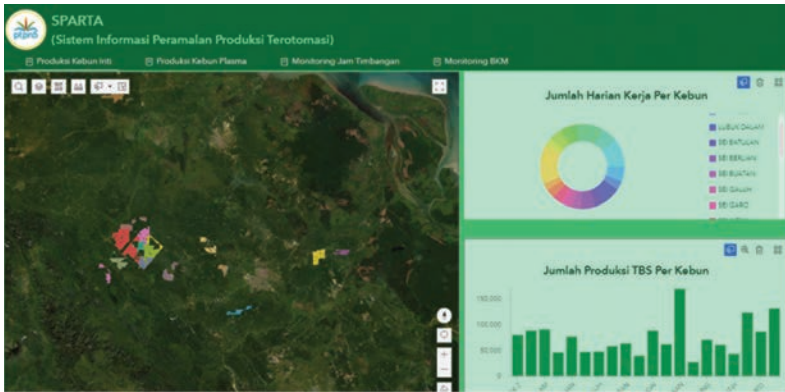Build a form survey for intelligent pest detection.

Intelligent pest detection

GeoAI Palm Oil Production Information System

Build a production GeoAI system that can perform descriptive and diagnostic analysis of production failures.

GeoAI Palm Oil Production Information System Dashboard

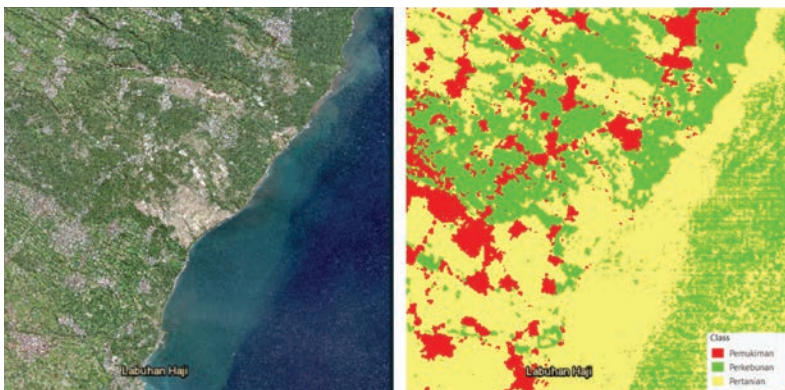GeoAI Palm Oil Production Information System

Products

- ArcGIS Pro Advanced (Notebook Server)

- ArcGIS Enterprise (Notebook Server)

- ArcGIS Experience

Required data

- Data Report Afdeling per month

Land Cover Change Detection

Build a system that can detect changes in land cover on a regular basis.

Imagery on Land Cover Change Detection Solution in Labuhan Haji, South Aceh
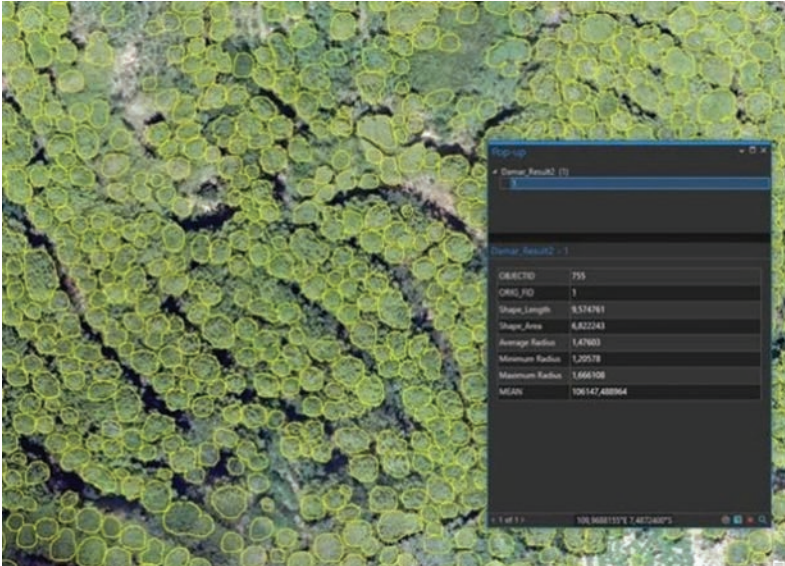
Products

- ArcGIS Desktop Advanced (Image Analyst, Spatial Analyst)

- ArcGIS Enterprise (Image Server, Notebook Server)

Required data

- Imagery (Landsat or Sentinel)

Resin Tree and Teak Tree Detection & Analysis

Build a system that can detect resin and teak trees.
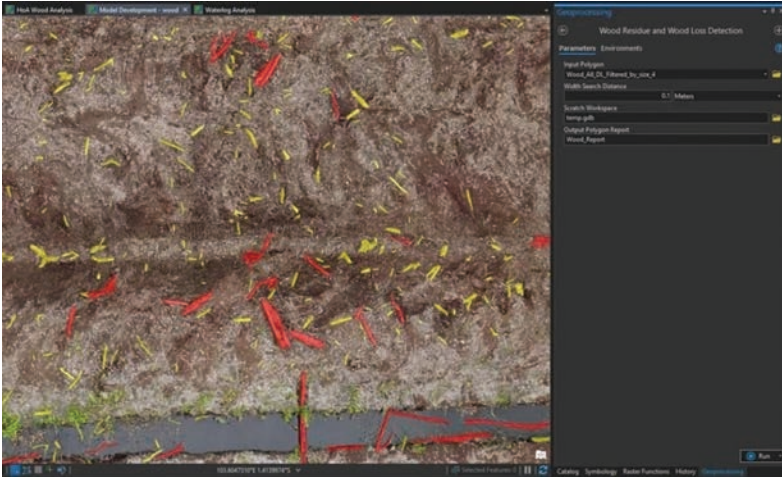

Resin Tree Detection

Teak Tree Detection

Products

- ArcGIS Pro Advanced (Image Analyst)

- ArcGIS Enterprise (Image Analyst)

Required data

- Drone Imagery High Resolution

Wood Detection and Analysis with GeoAI

Build a system that can classify the types of wood lost and wood residue.

Wood detection and analysis with GeoAI

Products

- ArcGIS Pro Advanced (Image Analyst, Spatial Analysis)

- ArcGIS Enterprise (Image Server, Image Analyst, Spatial Analysis)

Required data

- Drone Imagery High Resolution

Contact Esri Indonesia

Discover the value Esri Indonesia's GIS solutions will bring to your organisation. Call us on **(021) 2709 9881-84**.

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