

# What New Technologies are in Store for the **ArcGIS Enterprise 10.7.1 User?**

This year, ArcGIS Enterprise 10.7.1 introduced some amazing technology within its environment to help explore our geospatial world in new dimensions.

**T**he ArcGIS Notebook server is one of the novel features on the ArcGIS platform.

## WHAT IS ArcGIS NOTEBOOK SERVER?

The ArcGIS Notebook Server is a versatile web-based interface for powerful geospatial data analysis. Notebook allows you to perform analysis, automate workflows, and immediately visualise data and analysis results

in the geographic context.

## WHY ArcGIS NOTEBOOK SERVER?

- Works with Windows and Linux operating systems.
- No third-party application needed.
- Seamlessly integrates with your portal.

- Enriched with Python libraries.
- Codes and visualises maps simultaneously.
- Gives you the option to share your custom code with the world.

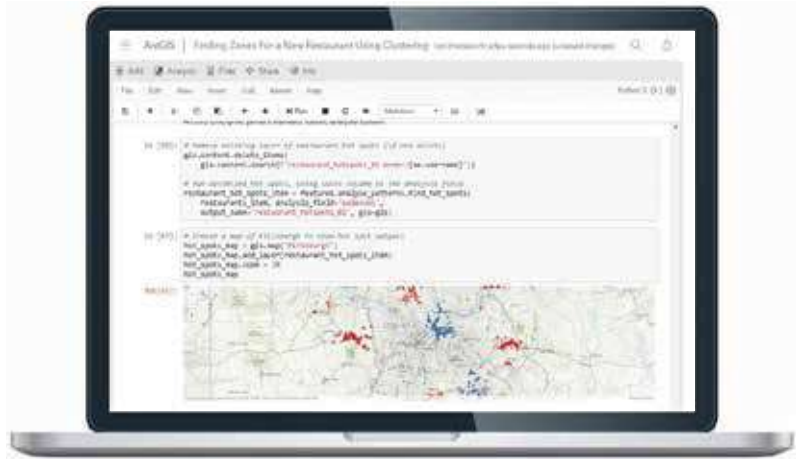
## SUMMARY

The ArcGIS Notebook Server is a haven for geospatial developers. It provides an integrated platform to create, share, and run data science, data management, and administrative scripts. Notebook authors enjoy Esri's Python resources – ArcGIS API for Python and ArcPy – in addition to popular open-source analytical, statistical, and machine learning libraries. ArcGIS Notebook provides rich detail, all of it at your fingertips.

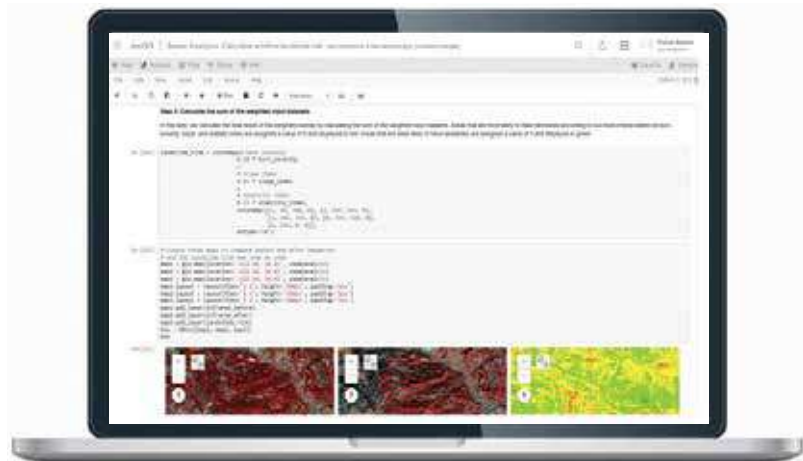
## ArcGIS EXCALIBUR

Speaking of detail, the ArcGIS Excalibur is certainly an ArcGIS feature to watch out for. ArcGIS Excalibur is a project-based imagery application that updates and enhances image-based workflows through intuitive experience.

ArcGIS Excalibur makes image exploitation easy for users. View live updates of drone, aircraft, or satellite imagery along with authoritative geospatial, contextual and operational layers. Manage and assign imagery exploitation



ArcGIS Notebook server helps to code and visualise data simultaneously, helping you lookup the most feasible sight for seeding business.



Help of ArcGIS Notebook server user can perform complex analysis with the help of Python code and visualize the result in a single frame.



ArcGIS Excalibur helps you simultaneously visualise and overlay live updates of aerial imagery.

Notebook authors enjoy Esri's Python resources – ArcGIS API for Python and ArcPy – in addition to popular open-source analytical, statistical, and machine learning libraries.

## WHO NEEDS ArcGIS EXCALIBUR?

ArcGIS Excalibur is an invaluable tool for industries that require geospatial imagery, including:

- Architecture, Engineering, and Construction
- Banking
- Education
- Electric and Gas Utilities
- Health and Human Services
- Insurance
- Manufacturing
- Natural Resources
- Petroleum and Pipeline
- Public Safety
- Real Estate
- Retail
- Central, state, and local governments
- Telecommunications
- Transportation
- Water



Tracker for ArcGIS helps collate field level activity, and apply field data to applications simultaneously. This helps identify gaps and data while on-the-go.

tasks across your organisation while leveraging the benefits of Esri Geospatial Cloud. Integrate ArcGIS Excalibur to your portal and mine your images intelligently. Compile, publish, share, and disseminate dynamic information products to consumers and devices in multiple formats.

ArcGIS Excalibur is a game-changer for analysts, imagery specialists, and managers, allowing them to collaborate and deliver timely geospatial intelligence to decision makers.

## TRACKER FOR ArcGIS

The path-breaking Tracker for ArcGIS is another ArcGIS Enterprise application that can be used to record where users are and where they have been. The Tracker stores user locations as point features in a scalable spatiotemporal Big Data repository. User tracks are secure within the location tracking service – users see only their own tracks; they can access other user tracks and last known locations, and perform analysis on tracks with additional permissions.

Tracker for ArcGIS activates location tracking, using two applications: the Track Viewer web app and the Tracker for



ArcGIS Excalibur applies the power of timely geospatial intelligence to wide-ranging applications, including those as localise as road damage, traffic, or accidents.

ArcGIS mobile app.

The Track Viewer for web allows administrators to monitor track views, define which user tracks are included in the view, and who can view those tracks.

The Tracker for ArcGIS mobile app is designed to track locations in the background, while optimising battery use. The mobile app can track users even without a data connection. Users are in control of when they are and are not tracked.

## TRACKER ARCHITECTURE

### Benefit of using Tracker for ArcGIS

Homeless counts are but one of many situations where the Tracker for ArcGIS can improve the efficiency, safety, and coordination of tracked activities



The mobile app can track users even without a data connection. Mobile users are in control of when they are and are not tracked.

using the power of location.

## WHAT ABOUT ArcGIS GEOANALYTICS?

Pivotal for Big Data processing and analysis capability, ArcGIS GeoAnalytics Server is a superior feature of the ArcGIS Enterprise 10.7.1. It provides a distributed computing framework that powers a collection of analysis tools capable of analysing large volumes of data. Aggregation, regression, detection, clustering, and much more help you visualise, understand, and act upon your Big Data. The GeoAnalytics Server helps you perceive insights - patterns, trends and anomalies - otherwise hidden in data.

The GeoAnalytics Server in ArcGIS 10.7.1 comes armed with 11 state-of-the-art Big Data

# 11 State-of-the-Art Big Data Analytics Tools

- Overlay Layers now supports new overlay operations (union, symmetric difference, and identity).
- Join Features supports proximate relationships geodesic distance.
- Clip Layer extracts input features from within specified polygons of interest.
- Dissolve Boundaries finds polygons that intersect or have the same field values, and merges them to form a single polygon.
- Enrich from Multi-Variable Grid appends attributes from a multivariable grid layer onto a point layer.
- Forest-based Classification and Regression creates models and generates predictions via an adaptation of a supervised machine learning method – Leo Breiman’s random forest algorithm.
- Generalized Linear Regression generates predictions and models of a dependent variable as related to a set of explanatory variables.
- Merge Layers integrates all the features of two separate layers into a single output layer.
- Describe Dataset provides a summary and sample of your Big Data.
- Find Point Clusters are equipped to apply the HDBSCAN algorithm.
- Calculate Field, Detect Incidents, and Reconstruct Tracks support new time-splitting options.



The GeoAnalytics Server helps you perceive insights – patterns, trends and anomalies – otherwise hidden in data.



analytics tools that can compute, analyse and visualise data even faster.

### ArcGIS Indoors

No discussion of ArcGIS novelty is complete without the brand-new ArcGIS Indoors – a game-changer in the area of indoor mapping.

ArcGIS Indoors is a complete system for indoor mapping, with the power to create a connected

workplace. Indoors generates a common operating picture for executives, workplace services personnel, other employees, and visitors to understand, manage, and use their workplace environment. An extended version of ArcGIS Pro, native web and mobile applications, including one for iOS, and an indoor information model help ArcGIS Indoors create, customise, share, and apply workplace maps and location data. This helps you manage

workplace operations and build a comfortable environment for your people.

### WHAT CAN USERS DO WITH ArcGIS Indoors?

#### Indoor mapping

Allow personnel across the workplace to access specifically curated indoor maps using unlimited user access and identity-based permissions.

#### Indoor wayfinding

Improve on-site mobility for employees, contractors, and even visitors using Indoors resource exploration and navigation.

#### Indoor location tracking

Capture real-time indoor location information for easy navigation and resource monitoring, allocation, and management.

#### Indoor Positioning System (IPS)

Experience indoor positioning with the same level of comfort you are used to outdoors. ■



ArcGIS Indoors streamlines way-finding within large complexes, giving users the luxury of specifically curated maps and personalised navigation.