Location Analytics Using ArcGIS® Insights

STUDENT EDITION

Copyright © 2022 Esri
All rights reserved.

Course version 2.0. Version release date October 2022.

Printed in the United States of America.

The information contained in this document is the exclusive property of Esri. This work is protected under United States copyright law and other international copyright treaties and conventions. No part of this work may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or by any information storage or retrieval system, except as expressly permitted in writing by Esri. All requests should be sent to Attention: Director, Contracts and Legal, Esri, 380 New York Street, Redlands, CA 92373-8100, USA.

Export Notice: Use of these Materials is subject to U.S. export control laws and regulations including the U.S. Department of Commerce Export Administration Regulations (EAR). Diversion of these Materials contrary to U.S. law is prohibited.

The information contained in this document is subject to change without notice.

Commercial Training Course Agreement Terms: The Training Course and any software, documentation, course materials or data delivered with the Training Course is subject to the terms of the Master Agreement for Products and Services, which is available at https://www.esri.com/~/media/Files/Pdfs/legal/pdfs/ma-full/ma-full.pdf. The license rights in the Master Agreement strictly govern Licensee's use, reproduction, or disclosure of the software, documentation, course materials and data. Training Course students may use the course materials for their personal use and may not copy or redistribute for any purpose. Contractor/Manufacturer is Esri, 380 New York Street, Redlands, CA 92373-8100, USA.

Esri Trademarks: Esri trademarks and product names mentioned herein are subject to the terms of use found at the following website: https://www.esri.com/legal/copyright-trademarks.html.

Other companies and products or services mentioned herein may be trademarks, service marks or registered marks of their respective mark owners.

Table of Contents

Esri resources for your organization

Course introduction

Course introduction
Course goals
Installing the course data
Icons used in this workbook

1 Introduction to ArcGIS Insights

Lesson introduction
ArcGIS Insights Workflow
Deploying ArcGIS Insights
Considerations for deployment
Review user types and roles
Explore an Insights page
Lesson review
Answers to Lesson 1 questions

2 Adding and displaying data

Lesson introduction
Insights workbook components
Data sources
Adding items to a workbook
Field types
Exercise 2: Explore field types
- Sign in to ArcGIS Insights Desktop
- Add a feature layer to a new workbook
- Add CSV files
- Rename the datasets
- Identify field types and explore attributes

Examine default visualizations
Lesson review
Answers to Lesson 2 questions

3 Creating a map in ArcGIS Insights

Lesson introduction
Enabling location
Table relationships
Relationship types

Exercise 3A: Enable location and create relationships using tabular data
Create a map card
Enable location on a dataset
Create a table relationship
View data in a table and on a map
Visualizing data in map cards
Analysis capabilities in map cards
Use visual analysis in a map card
Exercise 3B: Create a link analysis map card
View data table
Enable origin location
Enable destination location
Create link analysis map card
Lesson review
Answers to Lesson 3 questions

4 Creating a chart in ArcGIS Insights

Lesson introduction
Chart types
Determine the questions that charts can answer
Visualizing data in charts
Exercise 4A: Modify charts
Add new data to the workbook
Create a summary table
Select a chart type
Summarize multiple fields
Create a treemap chart
Create a temporal chart
Create charts for multidimensional data
Create a summary table for multiple fields
Selecting and filtering data
Exercise 4B: Apply filters and selections to data
Add data to the workbook
Apply a dataset filter
Apply a card filter
Apply cross filters
Make a selection on the map
Make a selection on a card
Lesson review

Answers to Lesson 4 questions

5 Performing analysis in ArcGIS Insights

Lesson introduction
Analysis types
Identify spatial analysis capabilities
Using the Data Browser
Explore the Data Browser
Exercise 5A: Enrich data in ArcGIS Insights
    Duplicate the page and add data
    Use a spatial filter
    Perform spatial aggregation
    Select a population density variable for geoenrichment
    Select demographic variables for geoenrichment
Identify nonspatial analysis capabilities
Exercise 5B: Perform vulnerability analysis
    Calculate z-scores for geoenriched data
    Add and calculate a field
    Evaluate variable relationships using a scatter plot matrix
    Visually analyze vulnerability results
Iterative exploratory analysis
Exercise 5C: Identify K-means clusters
    Find K-means clusters on geography
    Find K-means clusters on an attribute field
Lesson review
Answers to Lesson 5 questions

6 Scripting in ArcGIS Insights

Lesson introduction
Scripting tasks
The kernel gateway
Extending into scripting environments
Exercise 6: Import Python scripts to create a chart
    Connect to a Jupyter Kernel Gateway
    Import a Python script into Insights
    Create an image card
Lesson review

7 Sharing your Insights

Lesson introduction
Components for sharing in desktop deployment

Determine which component to share
Compare sharing options in ArcGIS Insights
Sharing with ArcGIS Insights
Customizing an Insights page
Considerations for sharing content
Exercise 7: Share components from Insights desktop
    Share a page
    Share a model
    Apply different data to a shared model
    Save a theme
    Access saved theme from the Insights home page
    Export a workbook package
Lesson review
Answers to Lesson 7 questions

Appendices

Appendix A: Esri data license agreement
Appendix B: Answers to lesson review questions
Appendix C: Additional resources