

Location Analytics Using ArcGIS® Insights

STUDENT EDITION

Copyright © 2023 Esri
All rights reserved.

Course version 3.0. Version release date August 2023.

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 Marks: Esri marks and product names mentioned herein are subject to the terms of use found at the following website: <https://www.esri.com/content/dam/esrisites/en-us/media/legal/copyrights-and-trademarks/esri-product-naming-guide.pdf>.

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 report
- 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 the data table

- Enable origin location

- Enable destination location

- Create a 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 for effective visualization

- 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 Enriching data

Lesson introduction

Data enrichment

Explore the Data Browser

Exercise 5: 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

Lesson review

Answers to Lesson 5 questions

6 Performing analysis in ArcGIS Insights

Lesson introduction

Analysis types

Identify spatial analysis capabilities

Identify nonspatial analysis capabilities

Exercise 6A: 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 6B: Identify K-means clusters

- Find K-means clusters on geography

- Find K-means clusters on an attribute field

Lesson review

Answers to Lesson 6 questions

7 Scripting in ArcGIS Insights

Lesson introduction

Scripting tasks

The kernel gateway

Extending into scripting environments

Exercise 7: 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

8 Sharing your ArcGIS Insights analysis results

Lesson introduction

Sharing analysis results from the desktop deployment

Compare sharing options in ArcGIS Insights

Sharing with ArcGIS Insights

Considerations for sharing content

Customize an Insights page

Exercise 8A: Share components from the Insights desktop deployment

- Publish a model

- Apply different data to a published model

- Save a theme

- Access a saved theme from the Insights home page

- Export a workbook package

Determining which component to share

Exercise 8B: Publish an Insights report

- View a page in the report designer

- Add a title to the report

- View the report based on a different screen size

- Publish a report

Lesson review

Answers to Lesson 8 questions

Appendices

Appendix A: Esri data license agreement

Appendix B: Answers to lesson review questions

Appendix C: Additional resources