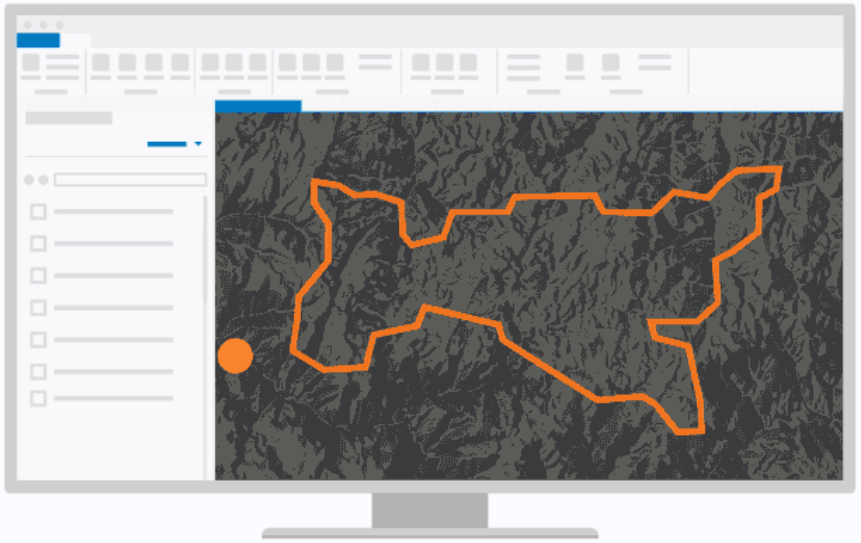
Spatial Data Science with Notebooks and ArcGIS Pro

Danny McVey

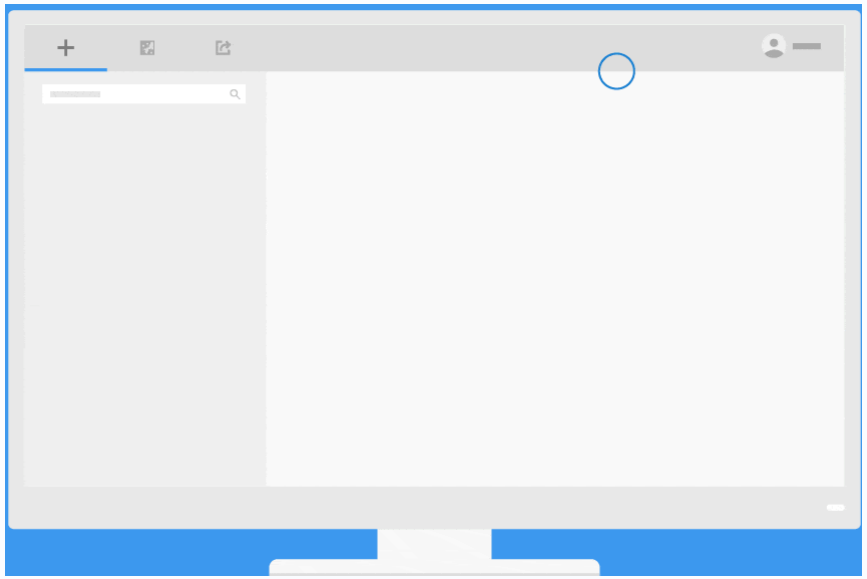
Alberto Nieto

2021 ESRI DEVELOPER SUMMIT

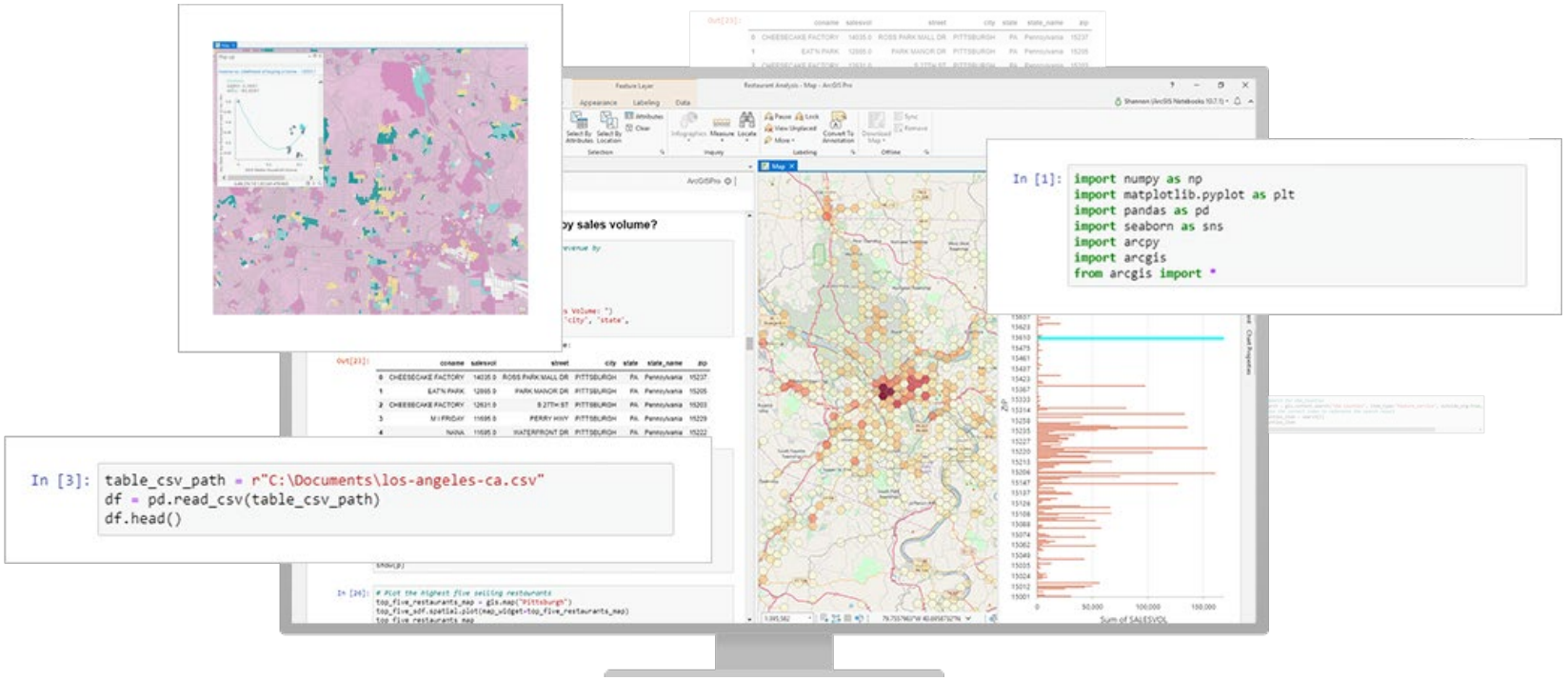
ArcGIS Pro



Notebooks



Notebooks in ArcGIS Pro



Spatial Analysis and Data Science Framework

Data Engineering

Visualization & Exploration

Spatial Analysis

Machine Learning & AI

Big Data Analytics

Modeling & Scripting

Sharing & Collaboration

Data
Engineering

Visualization
& Exploration

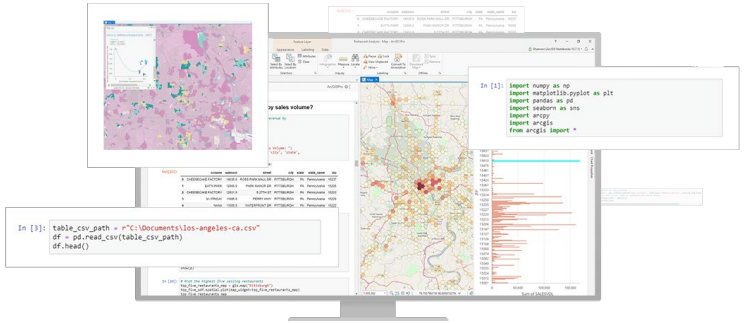
Spatial
Analysis

Machine Learning
& AI

Big Data
Analytics

Modeling
& Scripting

Sharing
& Collaboration



Data Engineering

Visualization & Exploration

Spatial Analysis

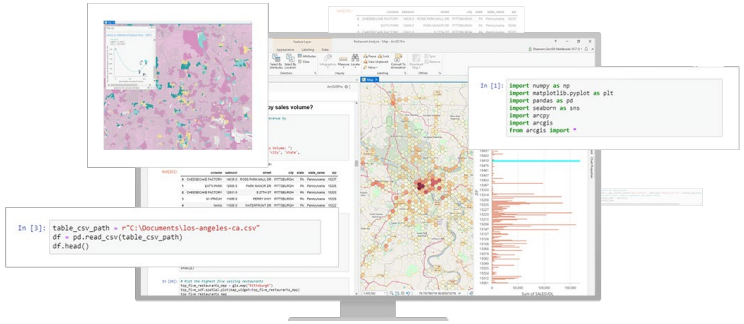
Machine Learning & AI

Big Data Analytics

Modeling & Scripting

Sharing & Collaboration

Use Pandas and rest of the python ecosystem to manage data



Data Engineering

Visualization & Exploration

Spatial Analysis

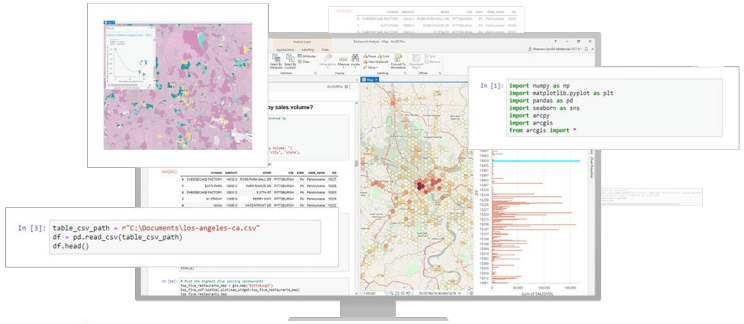
Machine Learning & AI

Big Data Analytics

Modeling & Scripting

Sharing & Collaboration

Use the robust data visualization capabilities of ArcGIS Pro in conjunction with your code



Data Engineering

Visualization & Exploration

Spatial Analysis

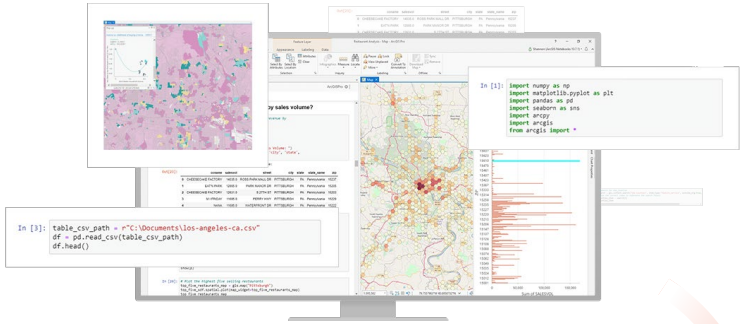
Machine Learning & AI

Big Data Analytics

Modeling & Scripting

Sharing & Collaboration

Use ArcGIS Pro's rich suite of spatial data science tools



Data Engineering

Visualization & Exploration

Spatial Analysis

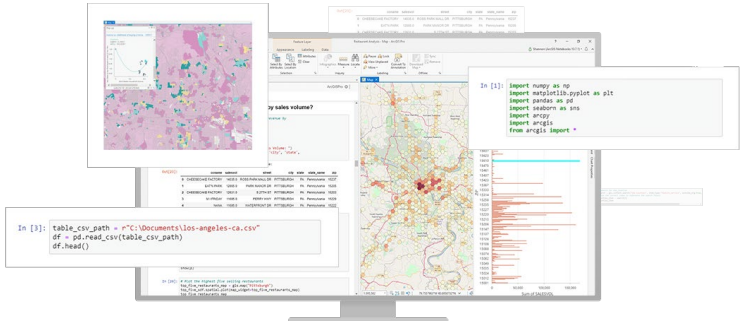
Machine Learning & AI

Big Data Analytics

Modeling & Scripting

Sharing & Collaboration

Access Python's ecosystem designed for Big Data workflows



Data Engineering

Visualization & Exploration

Spatial Analysis

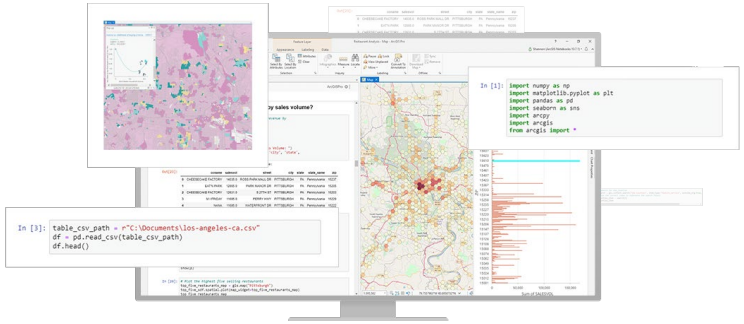
Machine Learning & AI

Big Data Analytics

Modeling & Scripting

Sharing & Collaboration

Umm… Script! :)



Data Engineering

Visualization & Exploration

Spatial Analysis

Machine Learning & AI

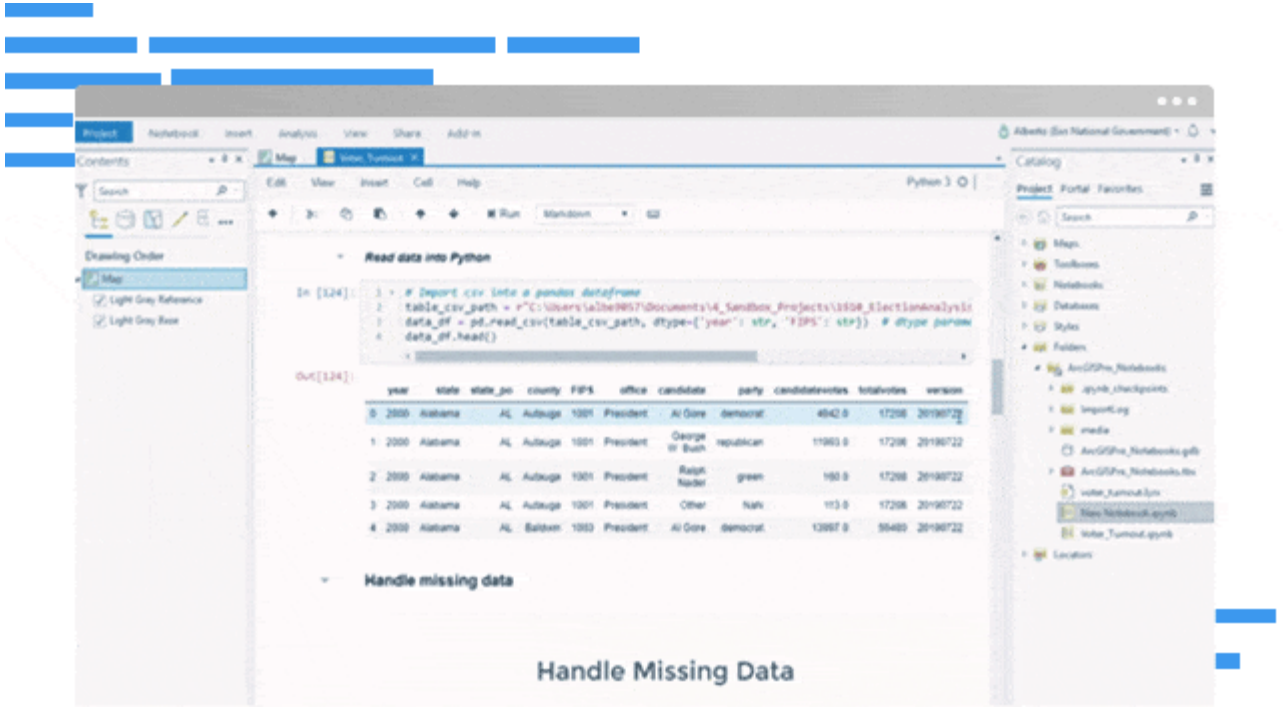
Big Data Analytics

Modeling & Scripting

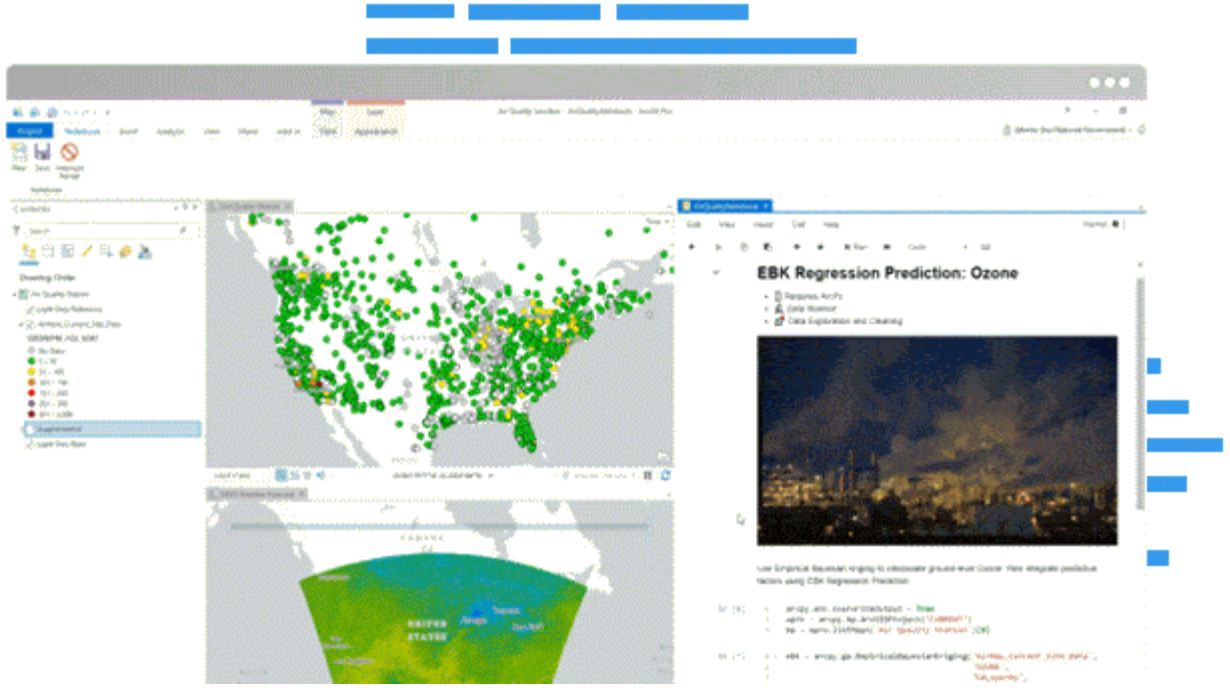
Sharing & Collaboration

Sharing ArcGIS Pro packages can now includes documented workflows with a notebook

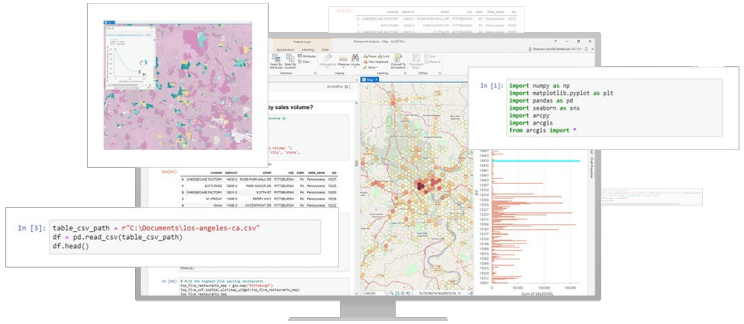
1. Useful to learn spatial data science workflows



2. Useful to prototype and document work



3. Useful to share and reproduce results



Data Engineering

Visualization & Exploration

Spatial Analysis

Machine Learning & AI

Big Data Analytics

Modeling & Scripting

Sharing & Collaboration

Sharing ArcGIS Pro packages can now includes documented workflows with a notebook

Resources

- ArcGIS Notebooks in ArcGIS Pro (2.7) - GeoNet, The Esri Community
- Notebook Lessons: Learn ArcGIS
- Five Tips To Get You Started With Jupyter Notebook
- Three Reasons to use Jupyter Notebooks as a GIS User

Copyright © 2021 Esri. All rights reserved.