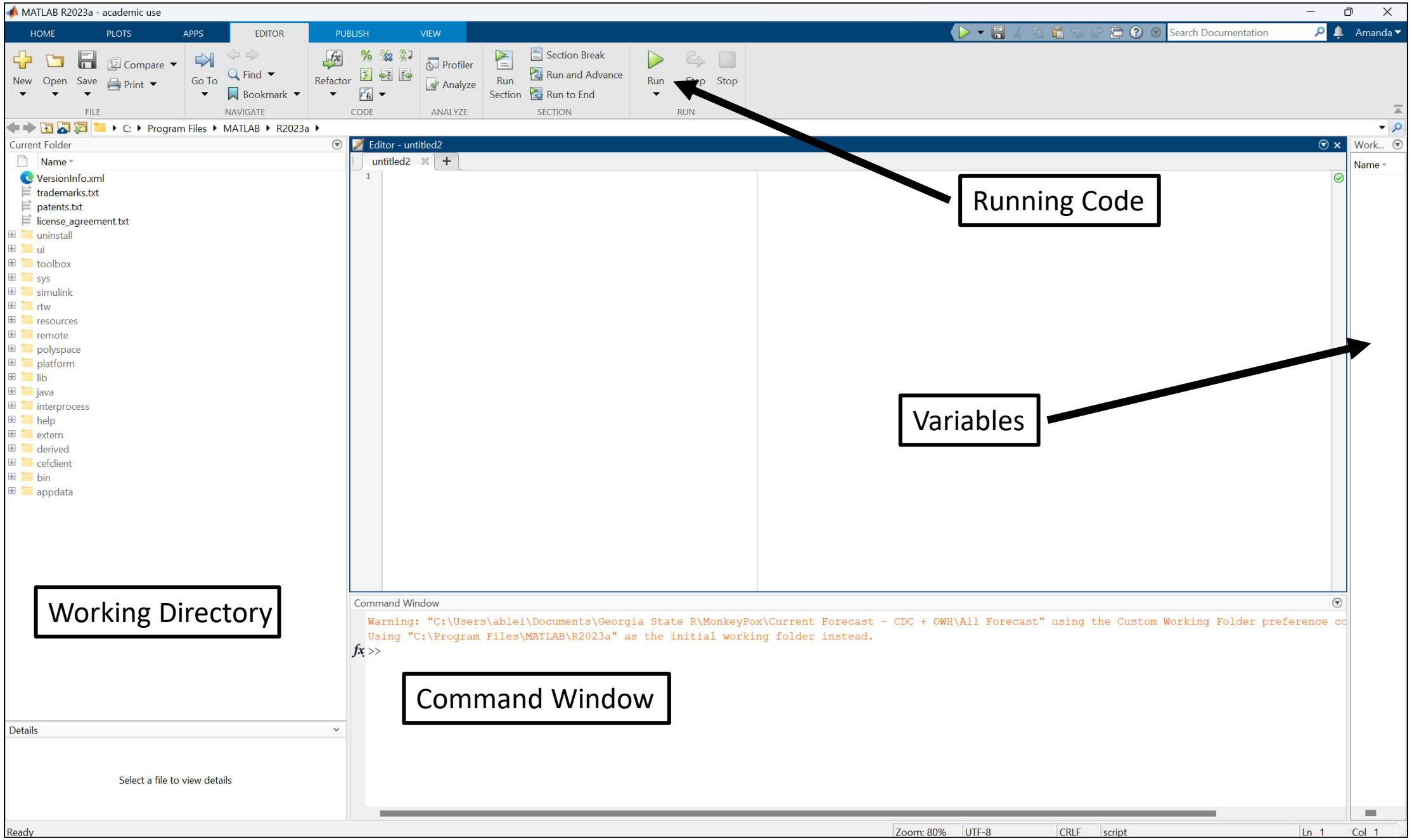
Exploring MATLAB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derived
cefclient
bin
appdata
Editor - untitled2
untitled2
Running Code
Variables
Work...
Name
Working Directory
Command Window
Warning: "C:\Users\ablei\Documents\Georgia State R\MonkeyPox\Current Forecast - CDC + OWH\All Forecast" using the Custom Working Folder preference co
Using "C:\Program Files\MATLAB\R2023a" as the initial working folder instead.
>>
Command Window
Details
Select a file to view details
Ready
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script
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Col 1

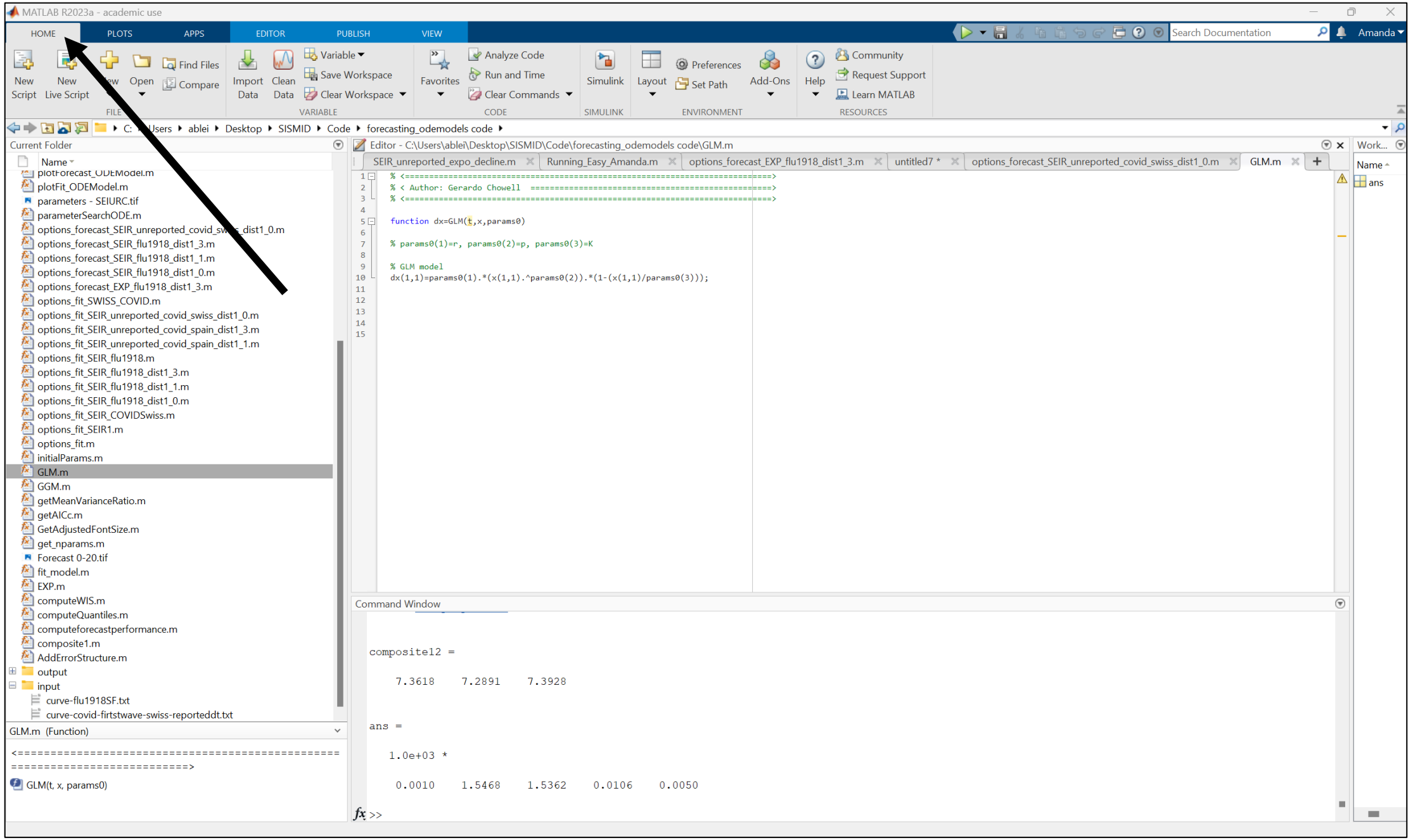
Needed Settings

Needed MATLAB Functions
Curve Fitting Toolbox
Global Optimization Toolbox
Optimization Toolbox
Signal Processing Toolbox
Simulink
Statistics and Machine Learning Toolbox

Needed Folders
input
output

Adding Packages

**Not needed if using Emory's Virtual Lab*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C: Users ablei Desktop SISMID Code forecasting_odemodels code
Current Folder
Name
plotForecast_ODEModel.m
plotFit_ODEModel.m
parameters - SEIURC.tif
parameterSearchODE.m
options_forecast_SEIR_unreported_covid_swiss_dist1_0.m
options_forecast_SEIR_flu1918_dist1_3.m
options_forecast_SEIR_flu1918_dist1_1.m
options_forecast_SEIR_flu1918_dist1_0.m
options_forecast_EXP_flu1918_dist1_3.m
options_fit_SWISS_COVID.m
options_fit_SEIR_unreported_covid_swiss_dist1_0.m
options_fit_SEIR_unreported_covid_spain_dist1_3.m
options_fit_SEIR_unreported_covid_spain_dist1_1.m
options_fit_SEIR_flu1918.m
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options_fit_SEIR_flu1918_dist1_0.m
options_fit_SEIR_COVIDSwiss.m
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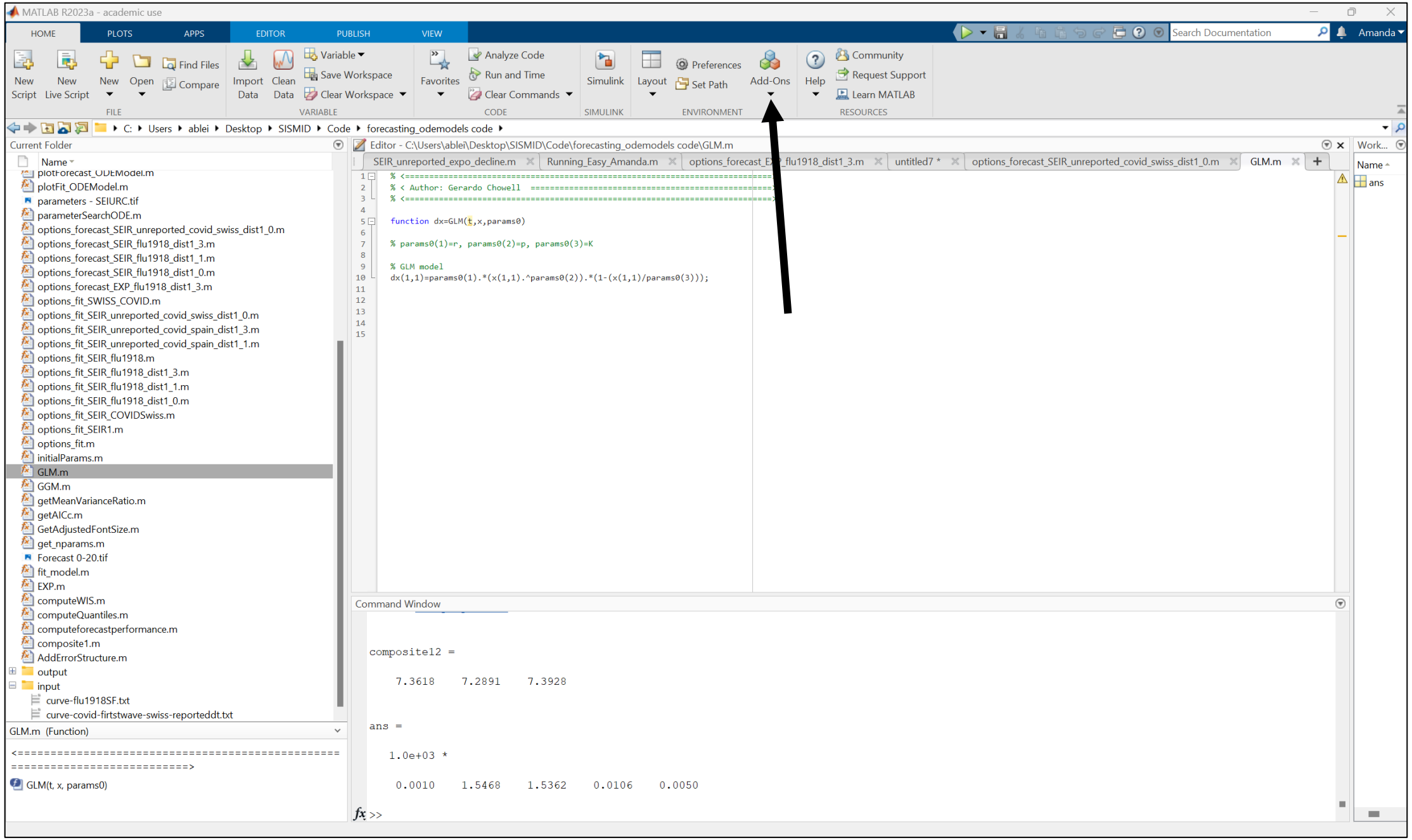
computeQuantiles.m
computeforecastperformance.m
composite1.m
AddErrorStructure.m
output
input
curve-flu1918SF.txt
curve-covid-firtstwave-swiss-reporteddt.txt
GLM.m (Function)
<==========>
GLM(t, x, params0)
Editor - C:\Users\ablei\Desktop\SISMID\Code\forecasting_odemodels code\GLM.m
SEIR_unreported_expo_decline.m
Running_Easy_Amanda.m
options_forecast_EXP_flu1918_dist1_3.m
untitled7 *
options_forecast_SEIR_unreported_covid_swiss_dist1_0.m
GLM.m
% <==========>
% < Author: Gerardo Chowell ==========>
% <==========>
function dx=GLM(t,x,params0)
% params0(1)=r, params0(2)=p, params0(3)=K
% GLM model
dx(1,1)=params0(1).*(x(1,1).^params0(2)).*(1-(x(1,1)/params0(3)));
Command Window
composite12 =
7.3618 7.2891 7.3928
ans =
1.0e+03 *
0.0010 1.5468 1.5362 0.0106 0.0050
fx >>
Work...
Name
ans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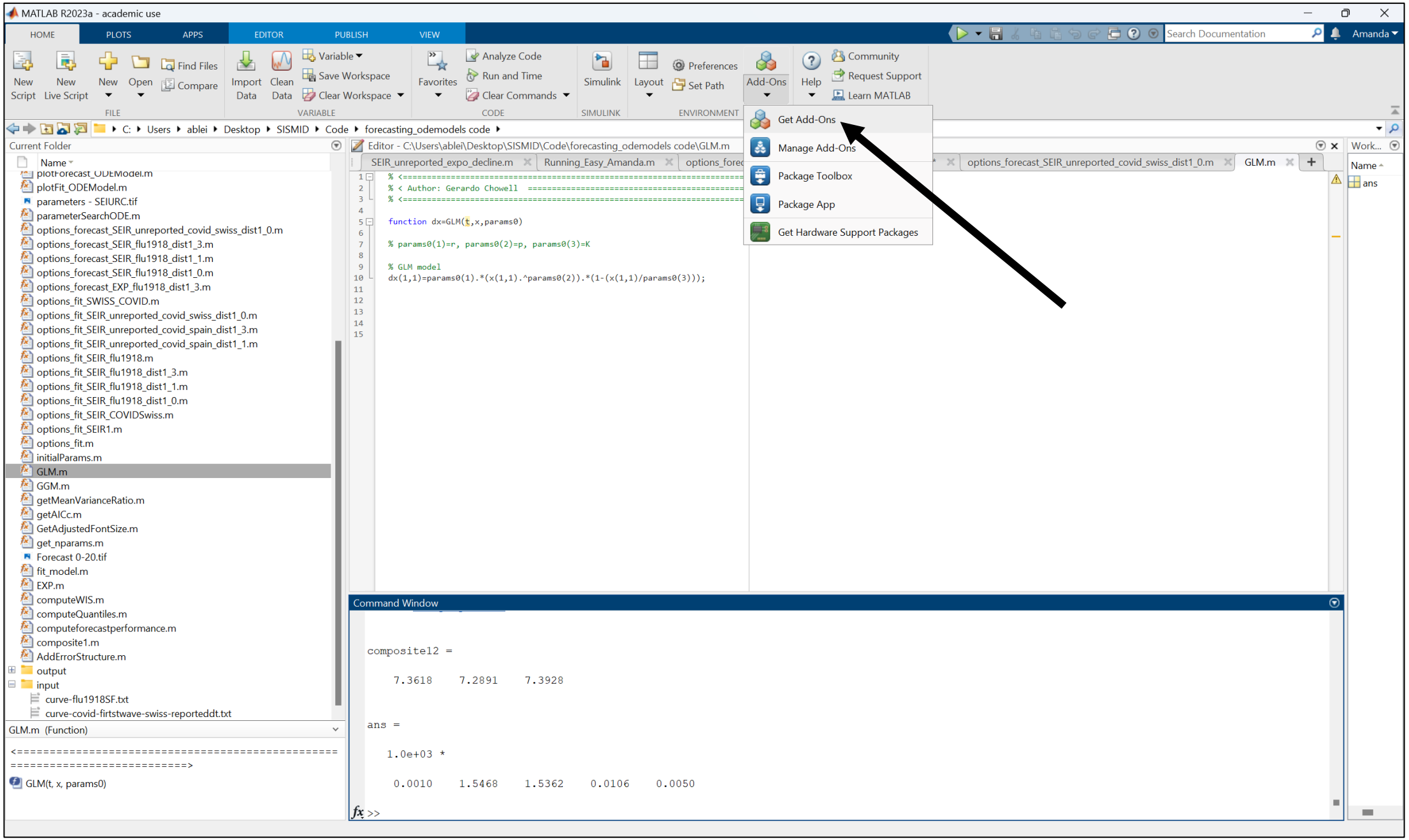
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options_forecast_SEIR_unreported_covid_swiss_dist1_0.m
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% < Author: Gerardo Chowell ==========
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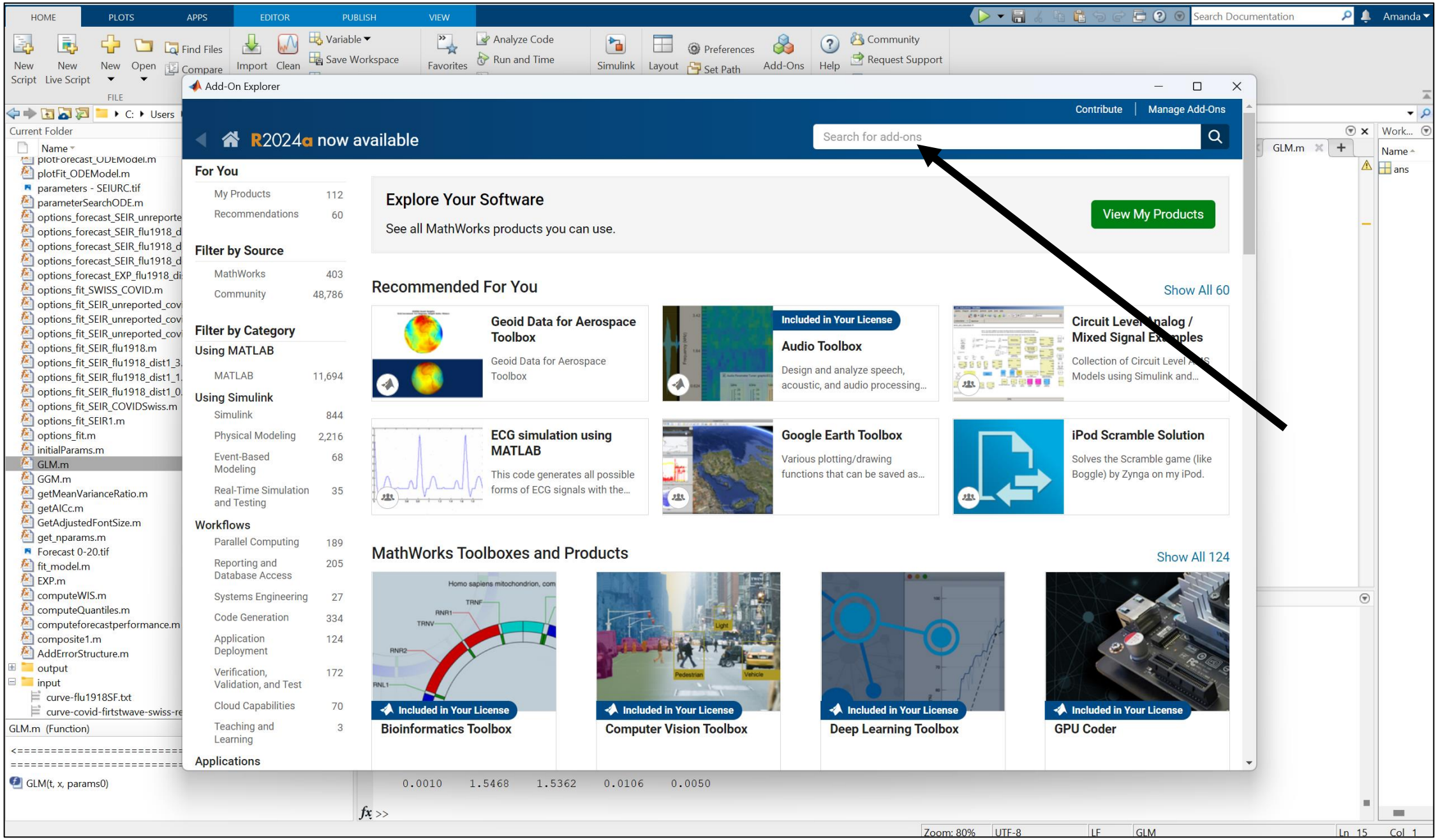
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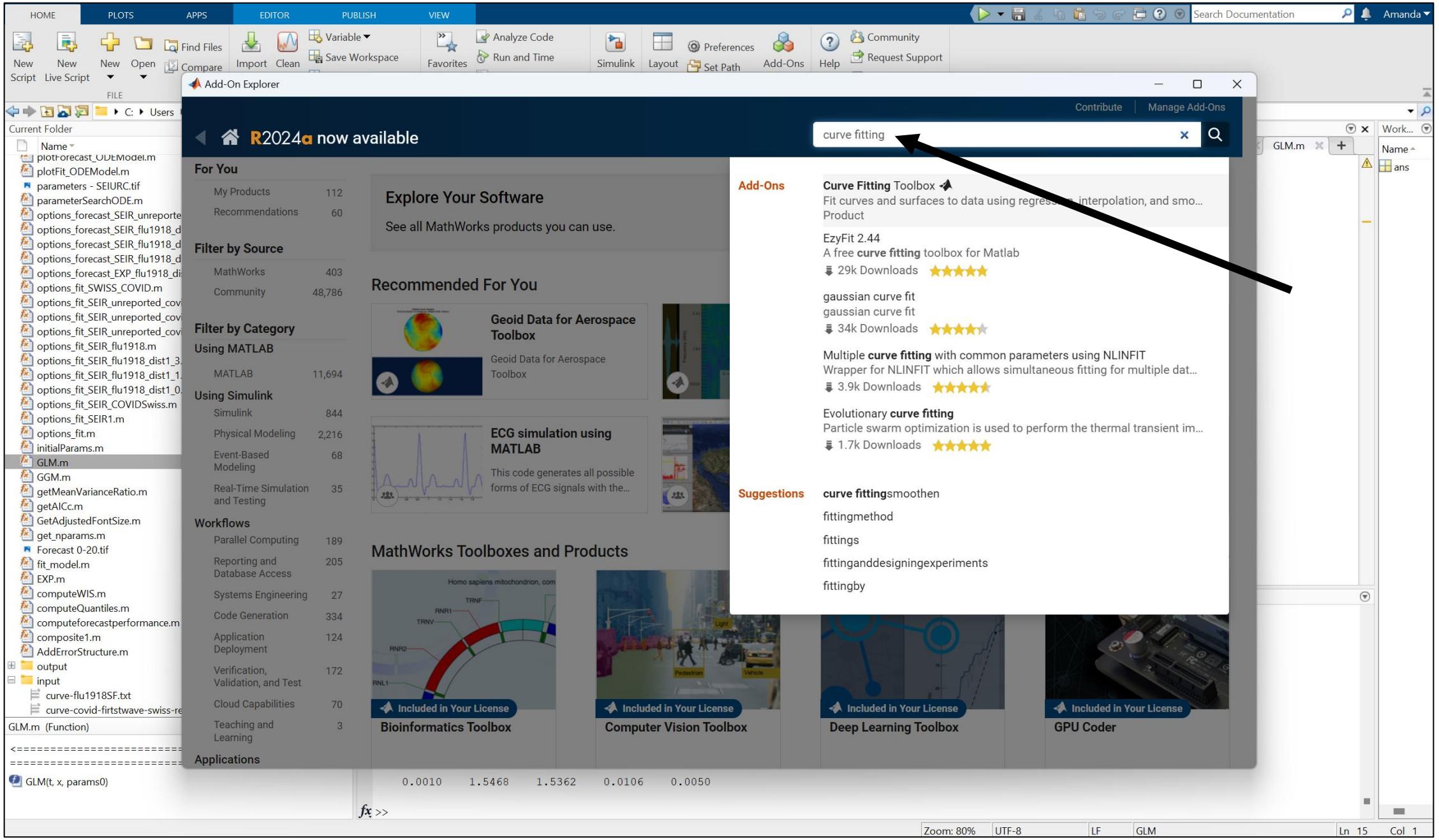
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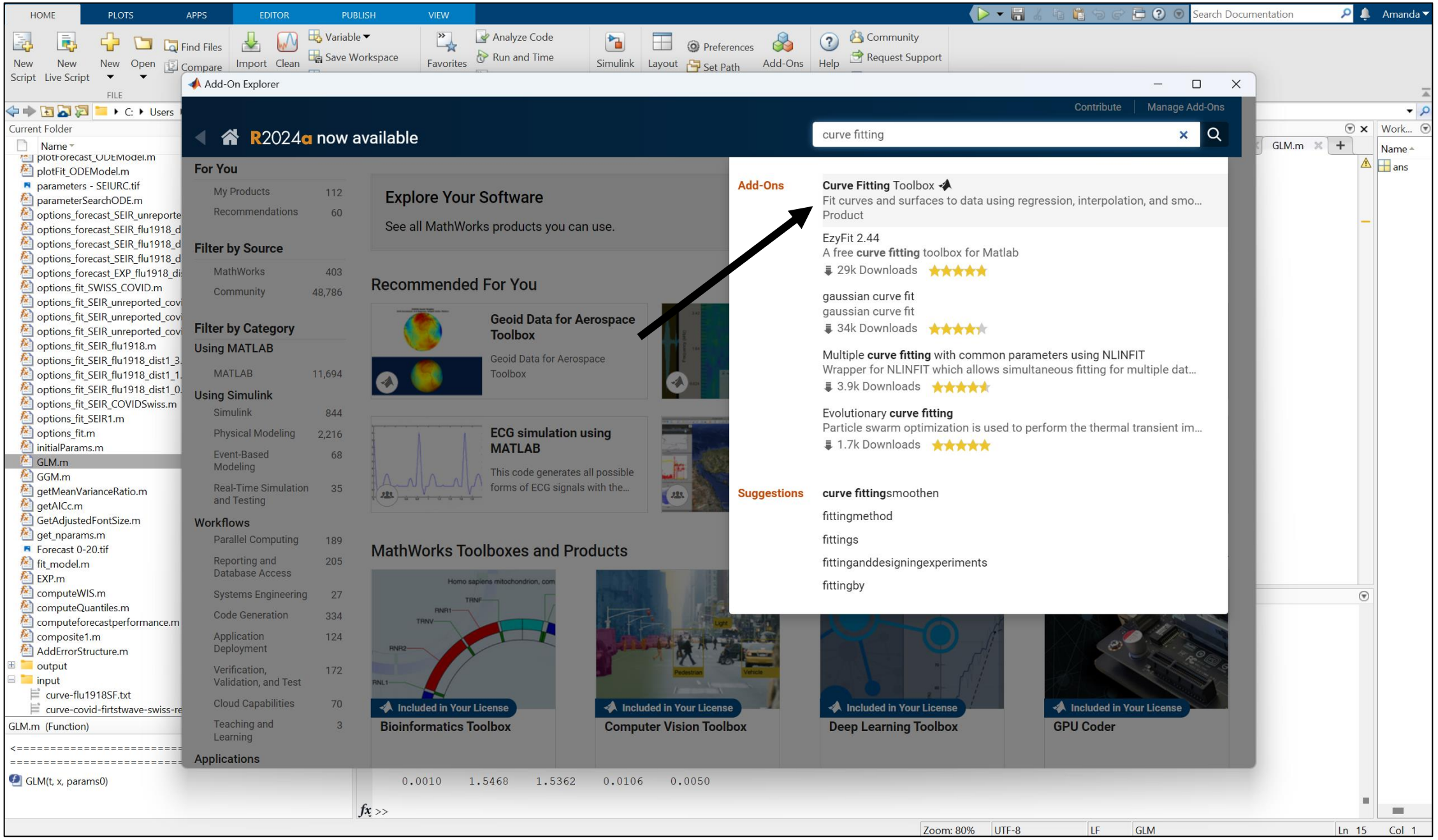
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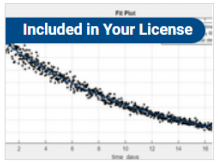

Curve Fitting Toolbox

by MathWorks

Fit curves and surfaces to data using regression, interpolation, and smoothing

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Overview | Functions | Apps | Examples

Curve Fitting Toolbox provides an app and functions for fitting curves and surfaces to data. The toolbox lets you perform exploratory data analysis, preprocess and post-process data, compare candidate models, and remove outliers. You can conduct regression analysis using the library of linear and nonlinear models provided or specify your own custom equations. The library provides optimized solver parameters and starting conditions to improve the quality of your fits. The toolbox also supports nonparametric modeling techniques, such as splines, interpolation, and smoothing. After creating a fit, you can apply a variety of post-processing methods for plotting, interpolation, and extrapolation; estimating confidence intervals; and calculating integrals and derivatives.

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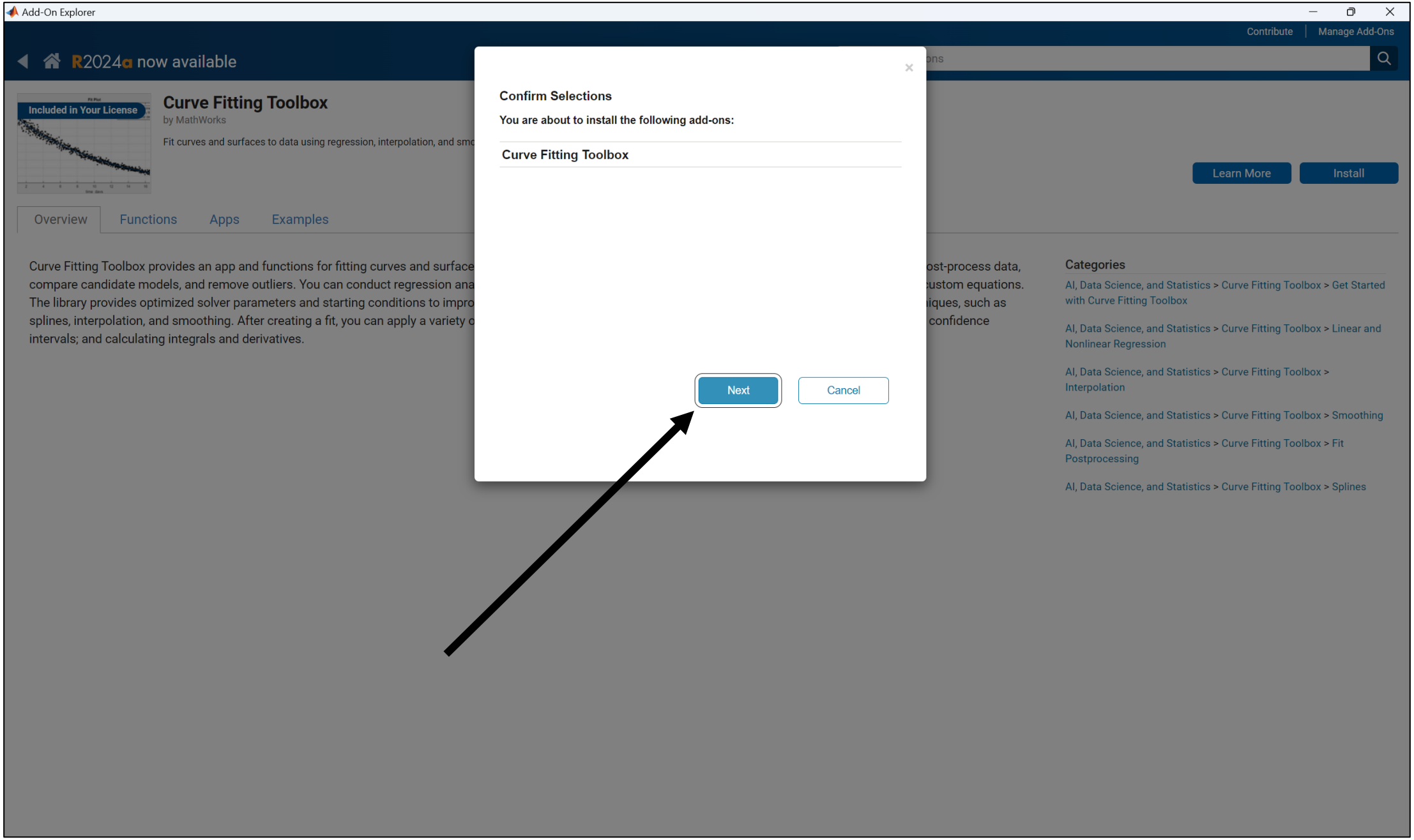
AI, Data Science, and Statistics > Curve Fitting Toolbox > Interpolation

AI, Data Science, and Statistics > Curve Fitting Toolbox > Smoothing

AI, Data Science, and Statistics > Curve Fitting Toolbox > Fit Postprocessing

AI, Data Science, and Statistics > Curve Fitting Toolbox > Splines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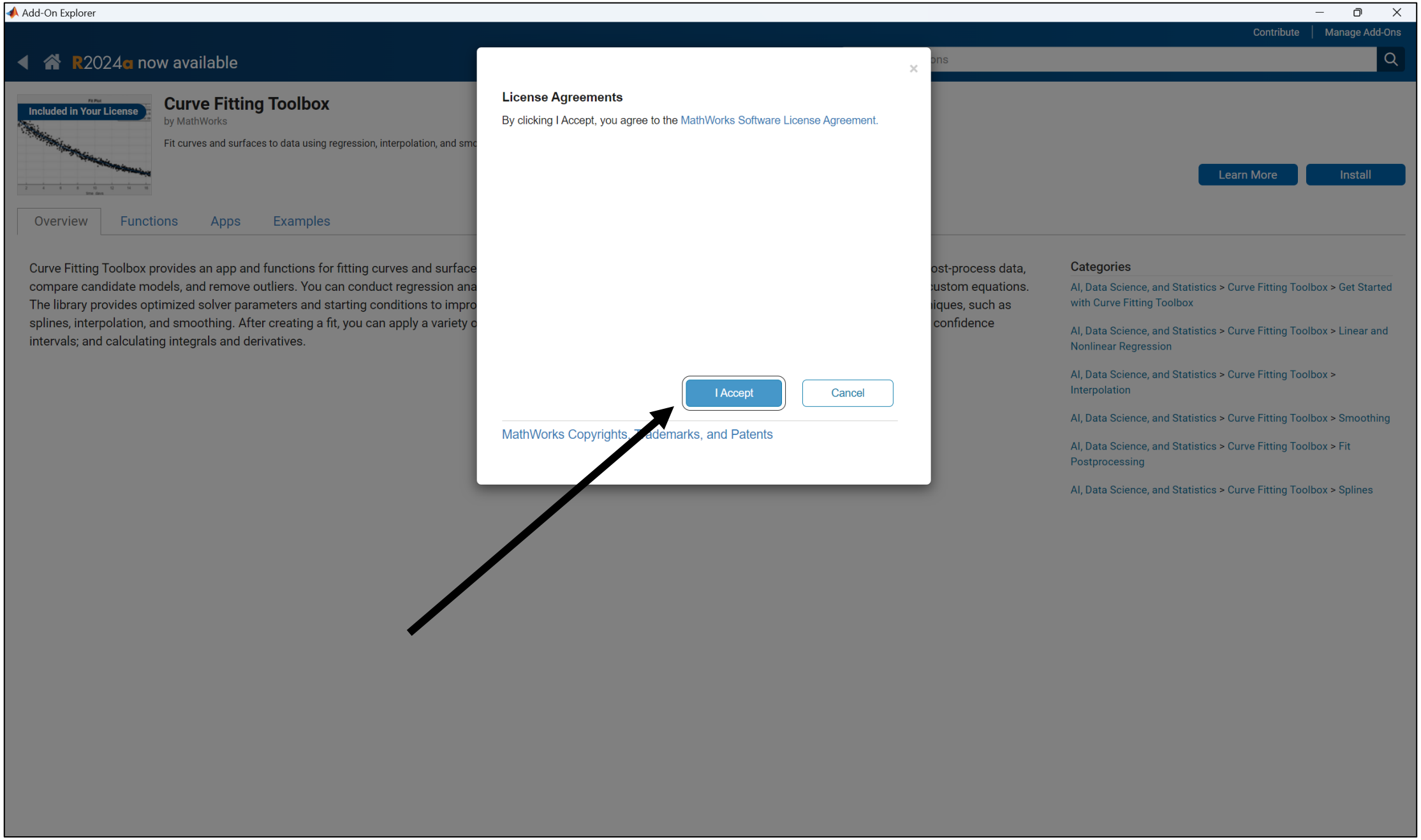
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Examples
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compare candidate models, and remove outliers. You can conduct regression ana
The library provides optimized solver parameters and starting conditions to impro
splines, interpolation, and smoothing. After creating a fit, you can apply a variety o
intervals; and calculating integrals and derivatives.
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confidence
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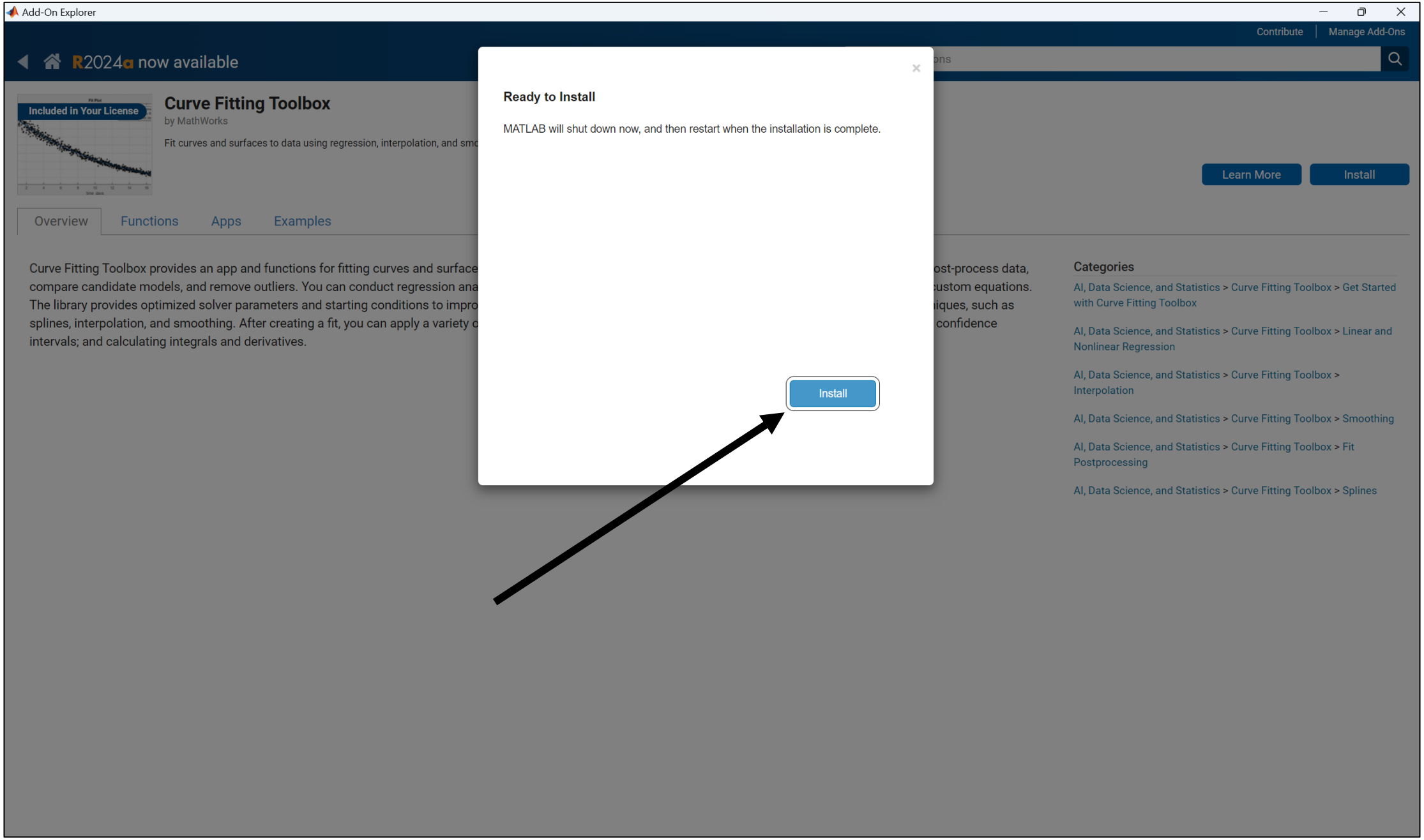
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