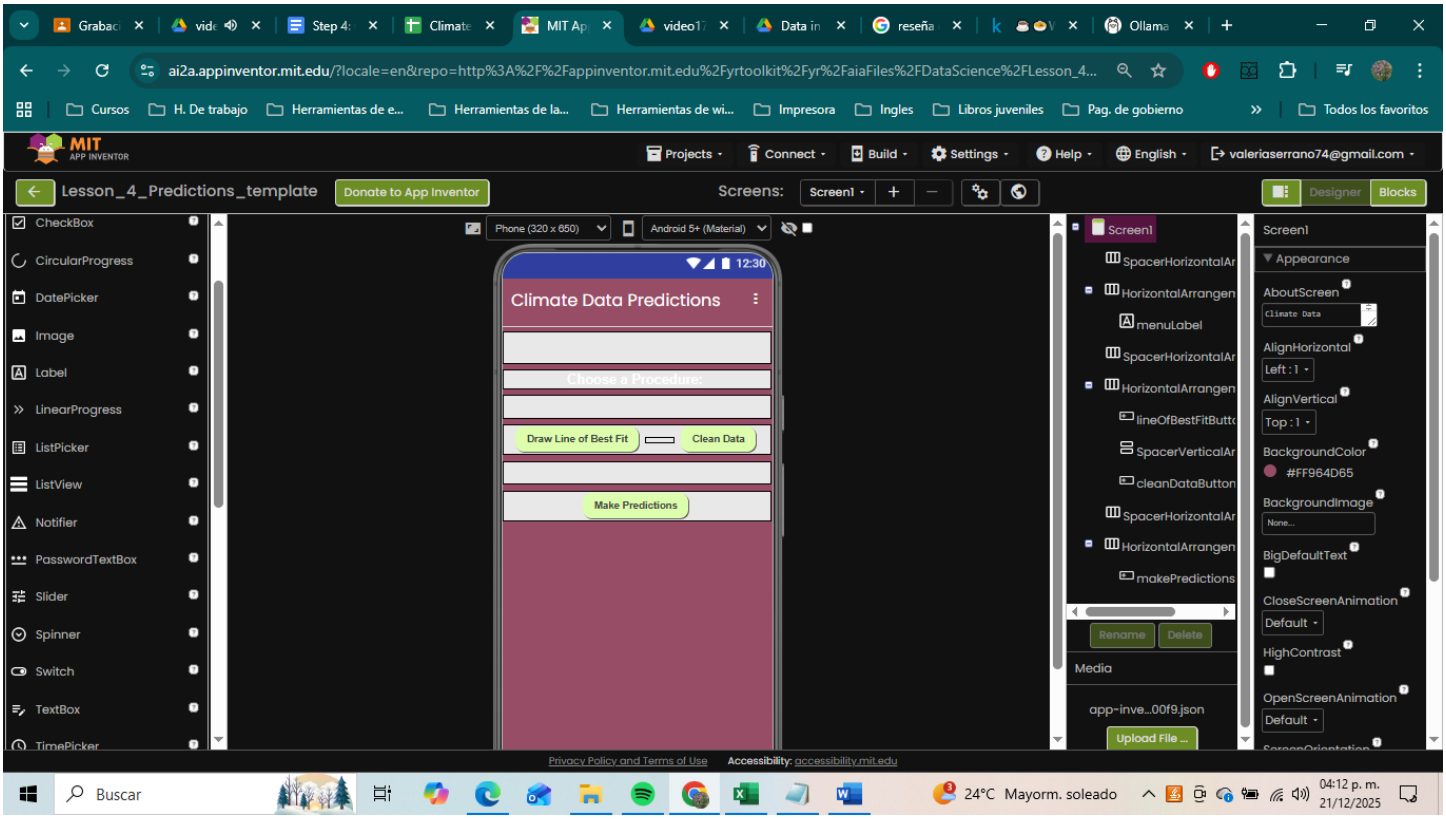
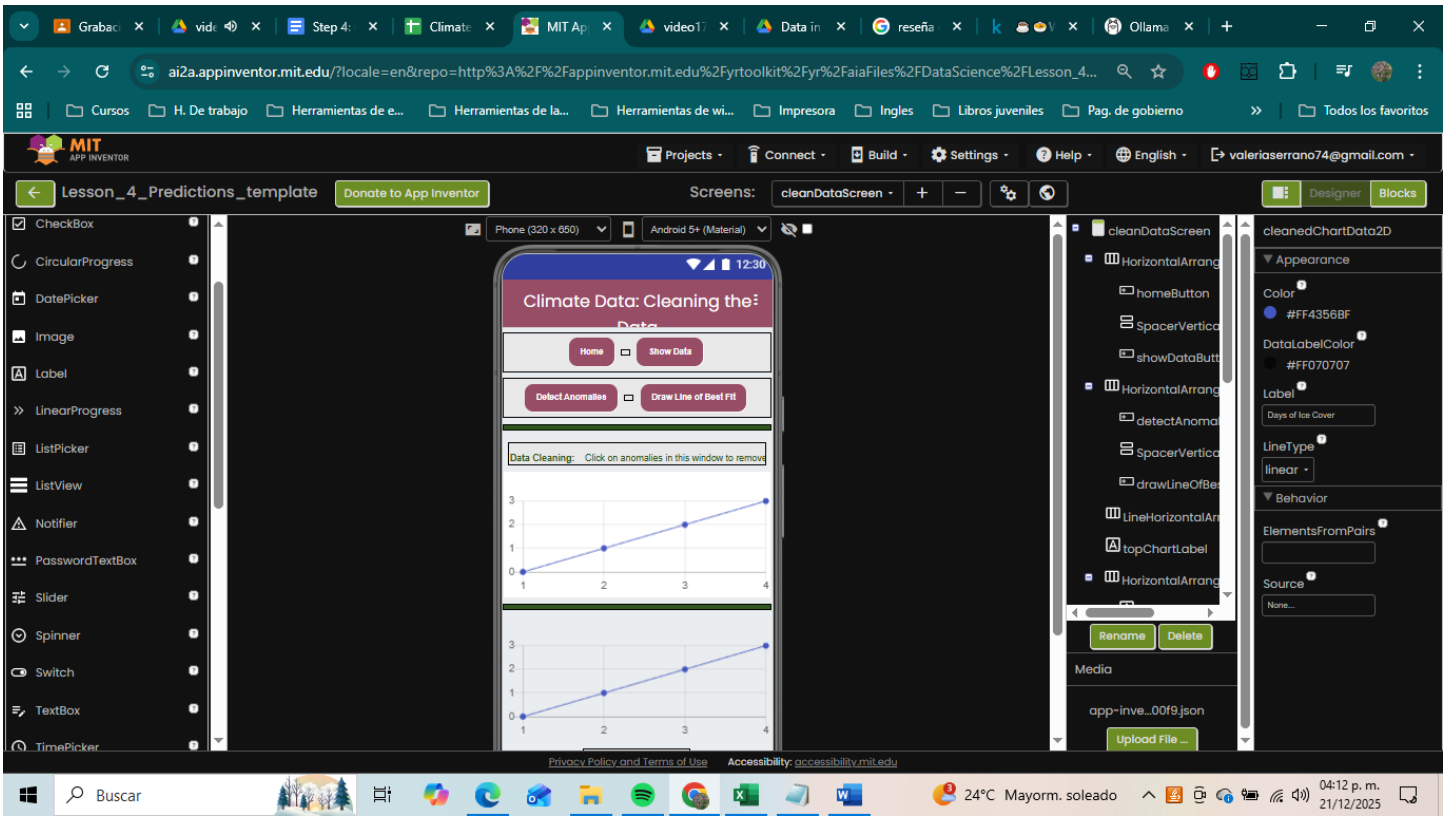
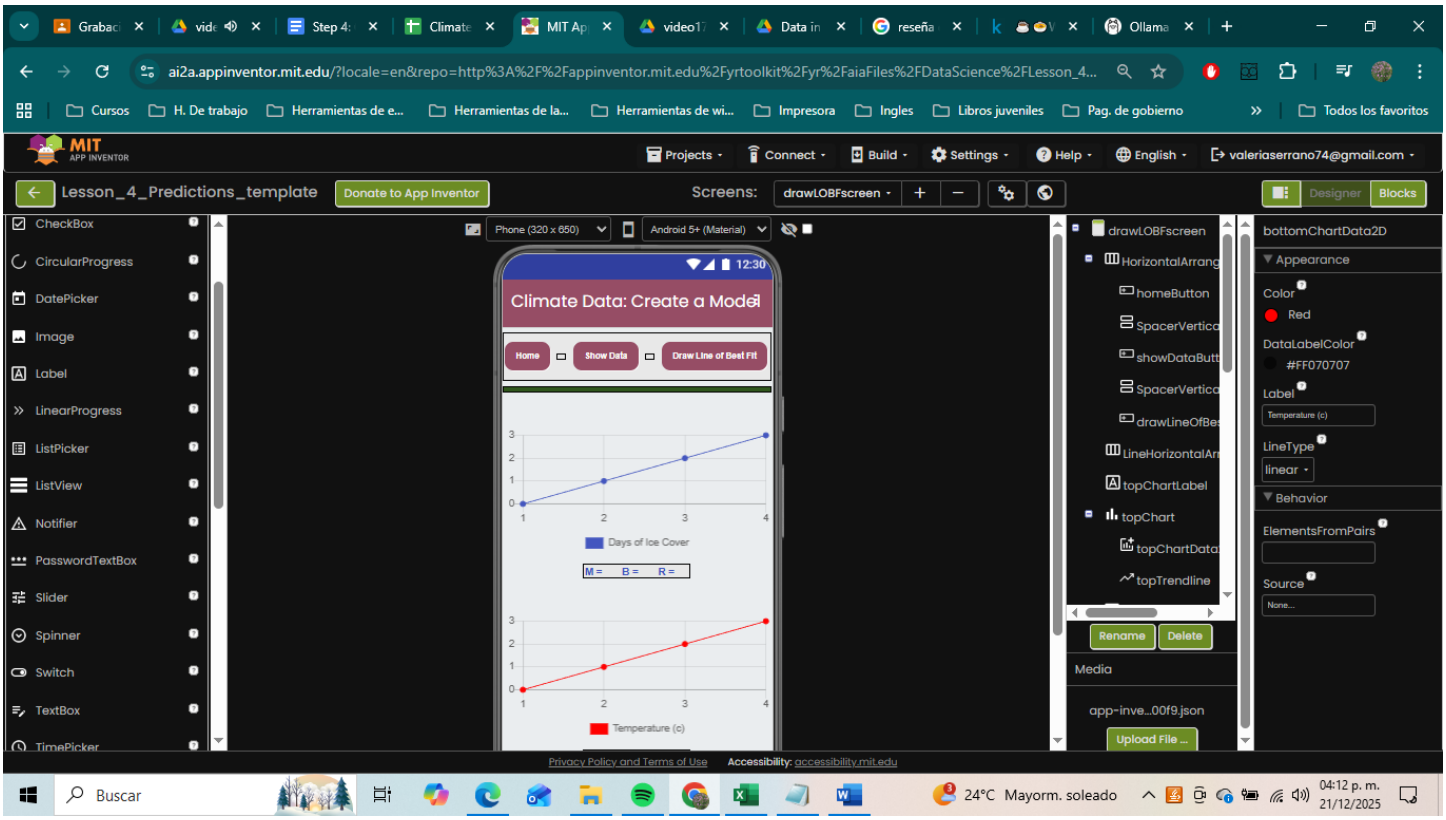
Nombre del alumno: Lisset Serrano Aguilar

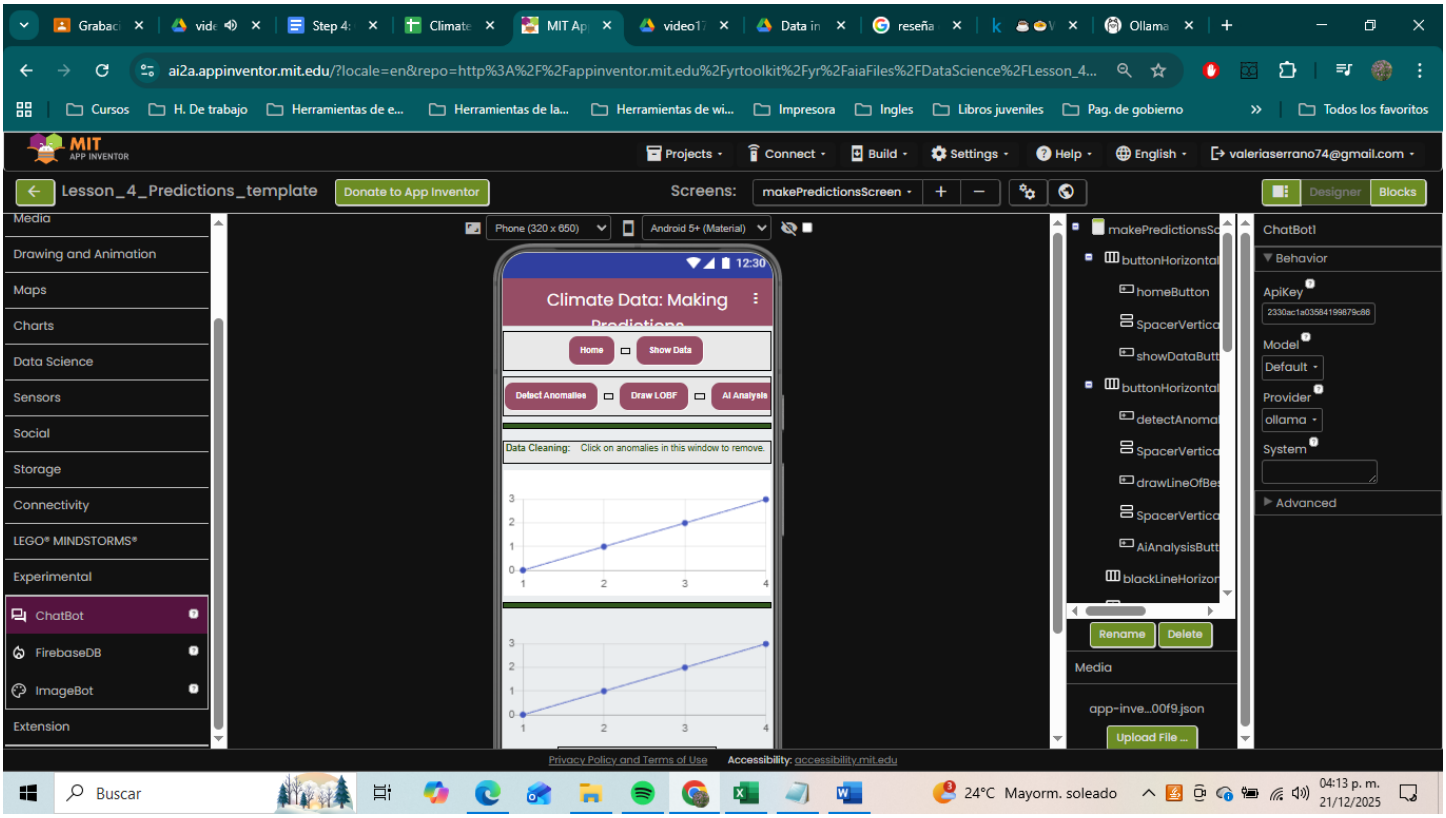
Entrega de proyecto final: Climate Data: Lake Ice Data with Real Gaps

Interfaz de diseño:



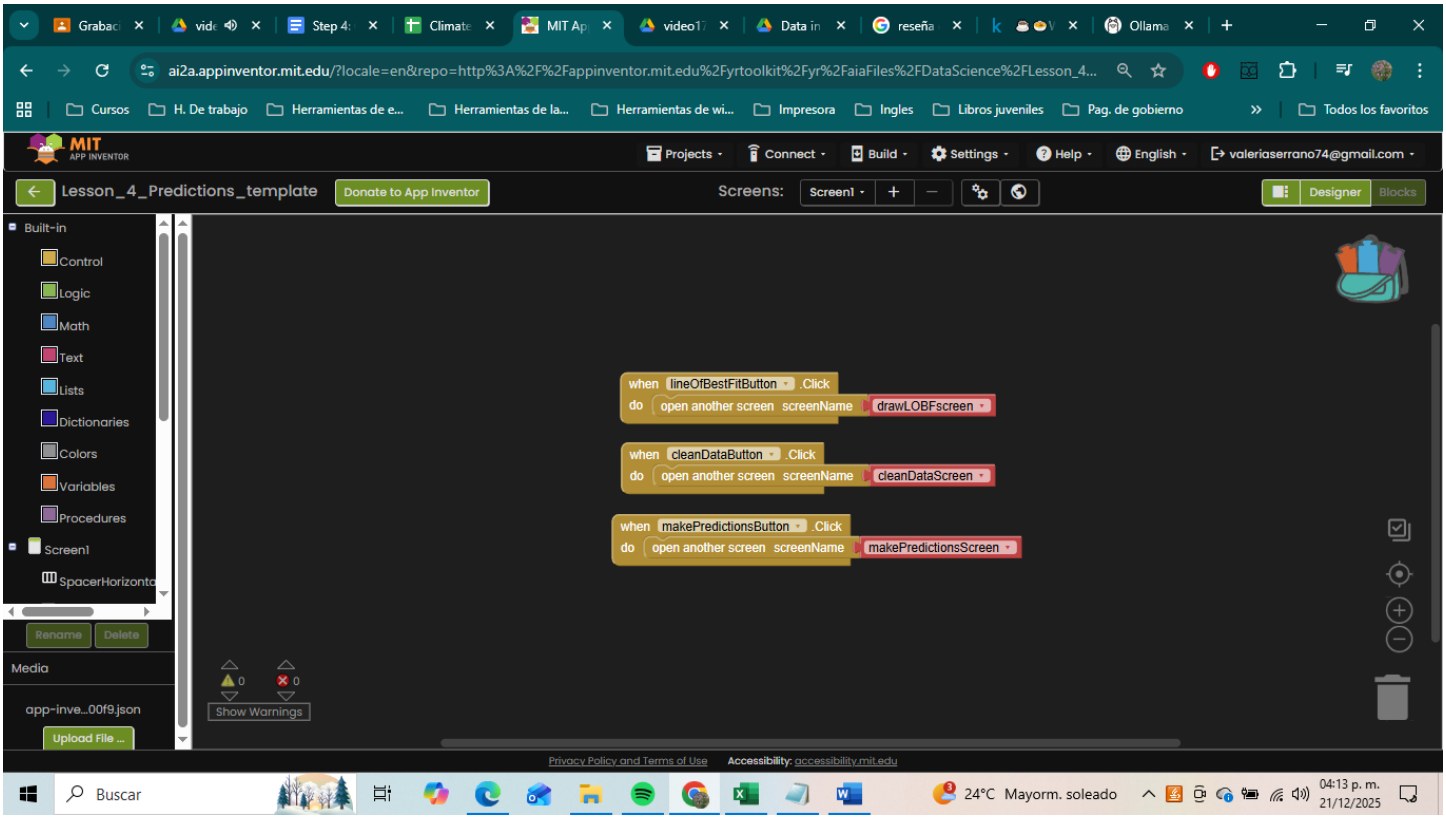



Lesson_4_Predictions_template
Donate to App Inventor
Screens: drawLOBFscreen
Designer
Blocks
Climate Data: Create a Model
Home
Show Data
Draw Line of Best Fit
Days of Ice Cover
M = B = R =
Temperature (c)
Rename
Delete
Media
Upload File ...

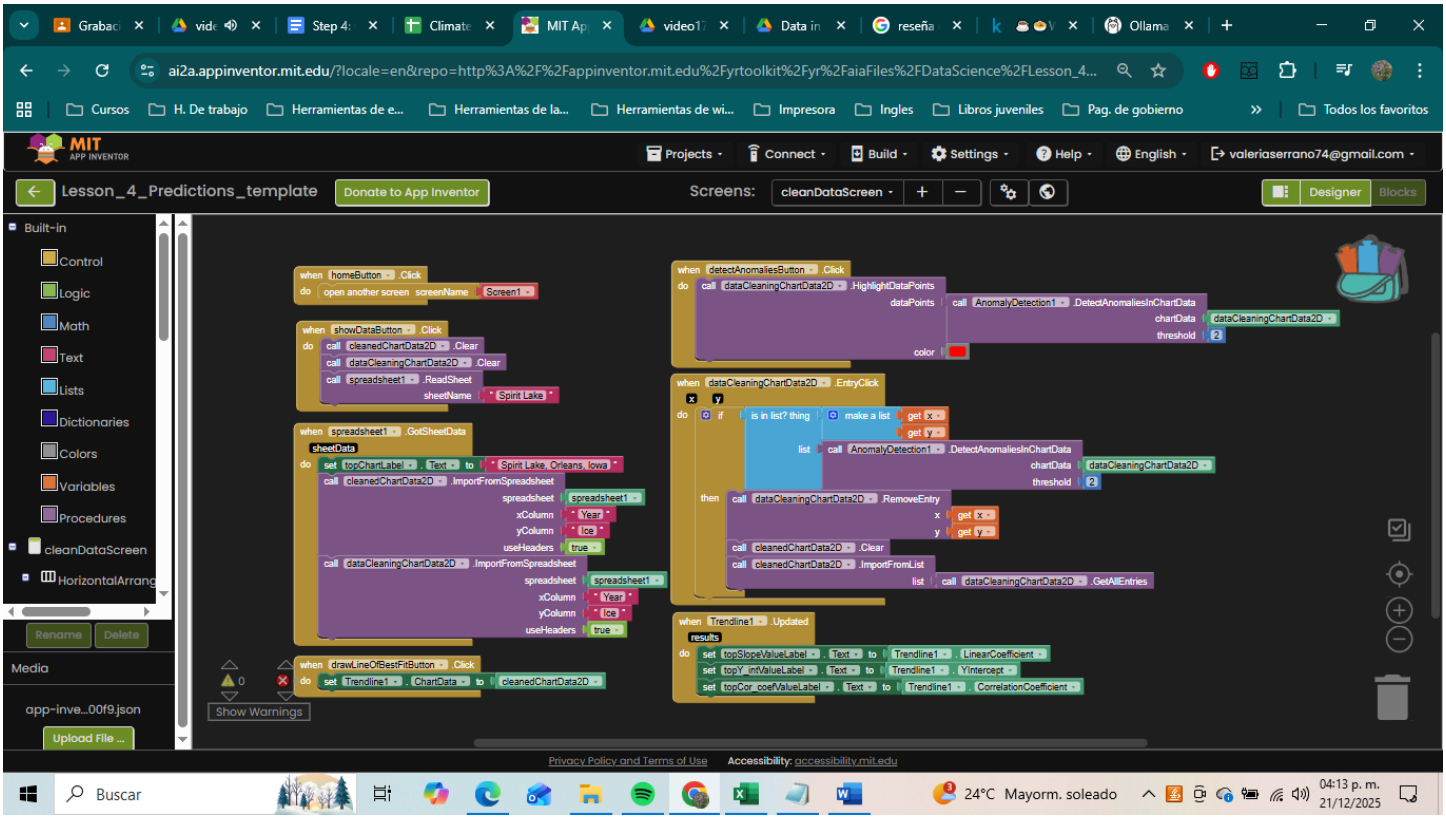

Lesson_4_Predictions_template
Donate to App Inventor
Screens: makePredictionsScreen
Designer
Blocks
Climate Data: Making Predictions
Home
Show Data
Detect Anomalies
Draw LOBF
AI Analysis
Data Cleaning: Click on anomalies in this window to remove.
Rename
Delete
Media
Upload File ...

Programación en bloques:

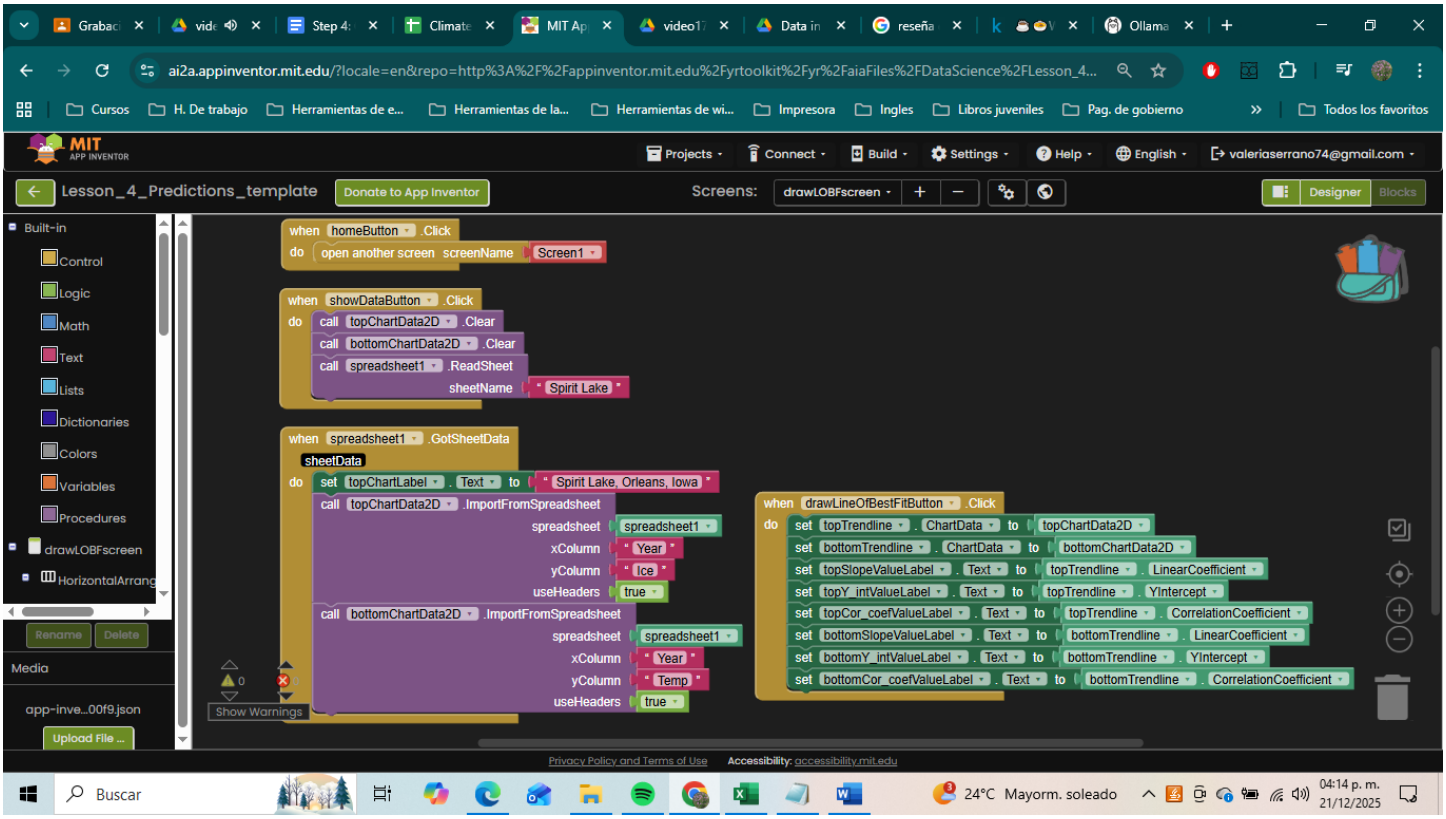
Screen 1



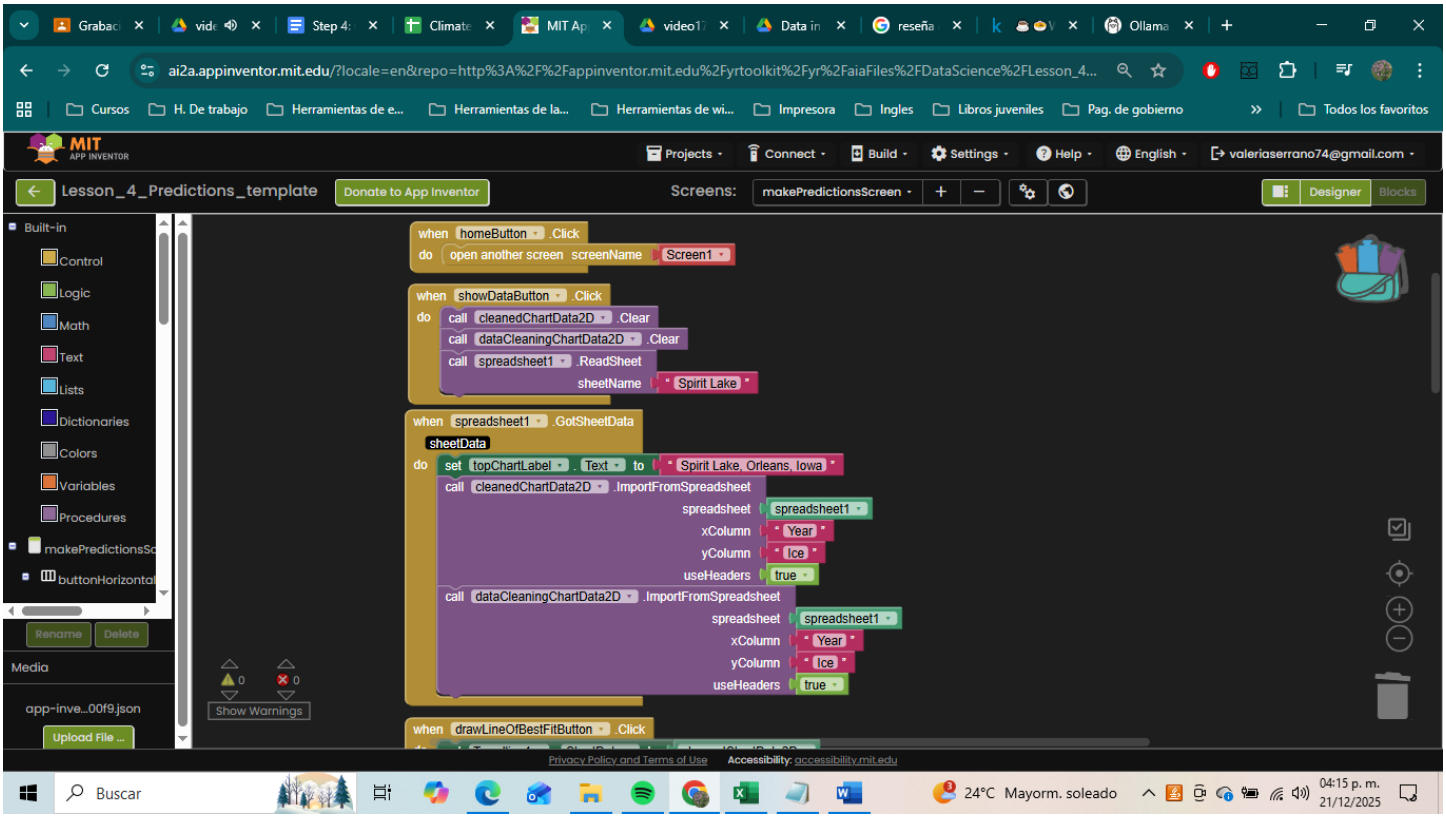
Clean Data Screen

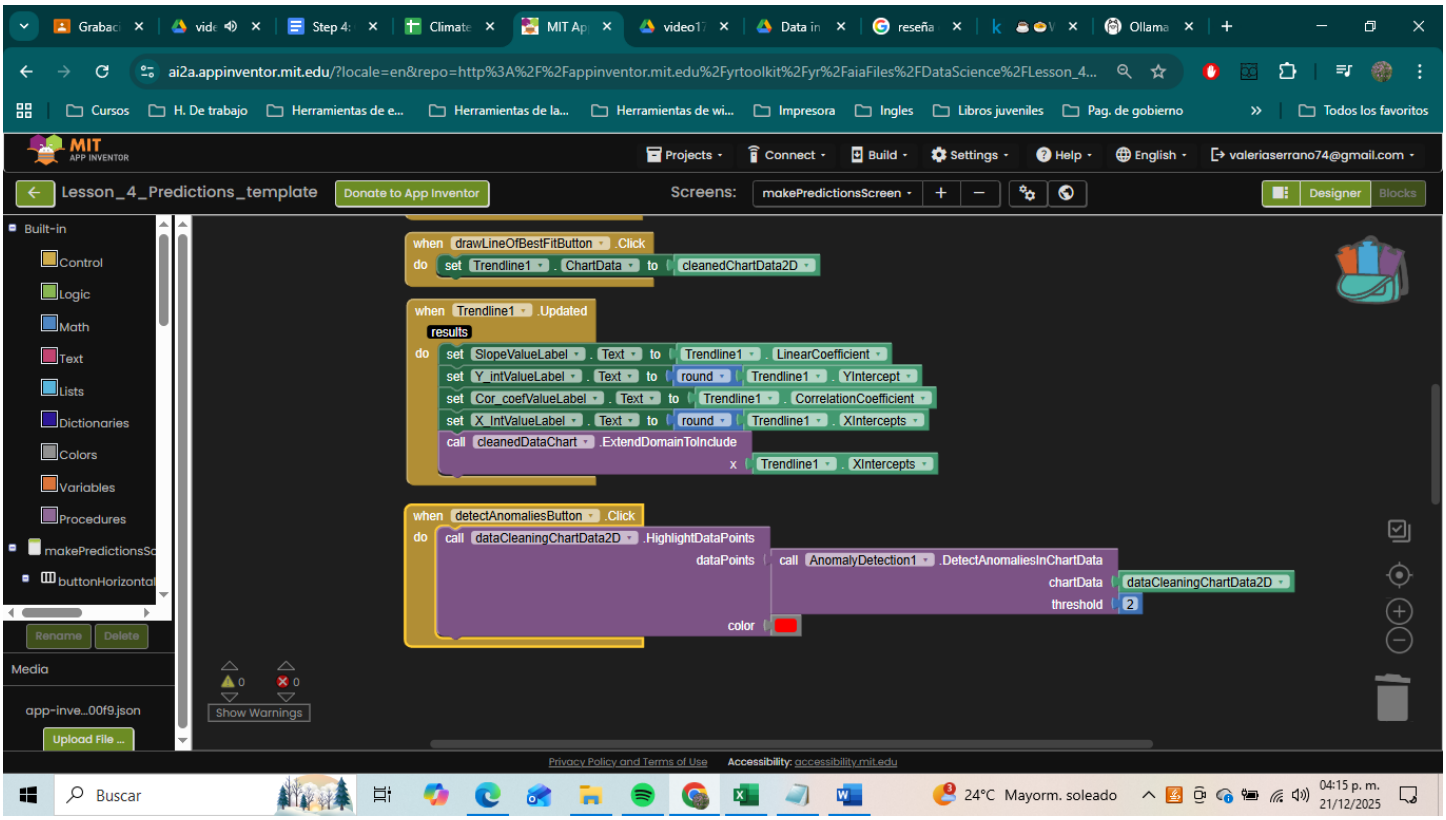


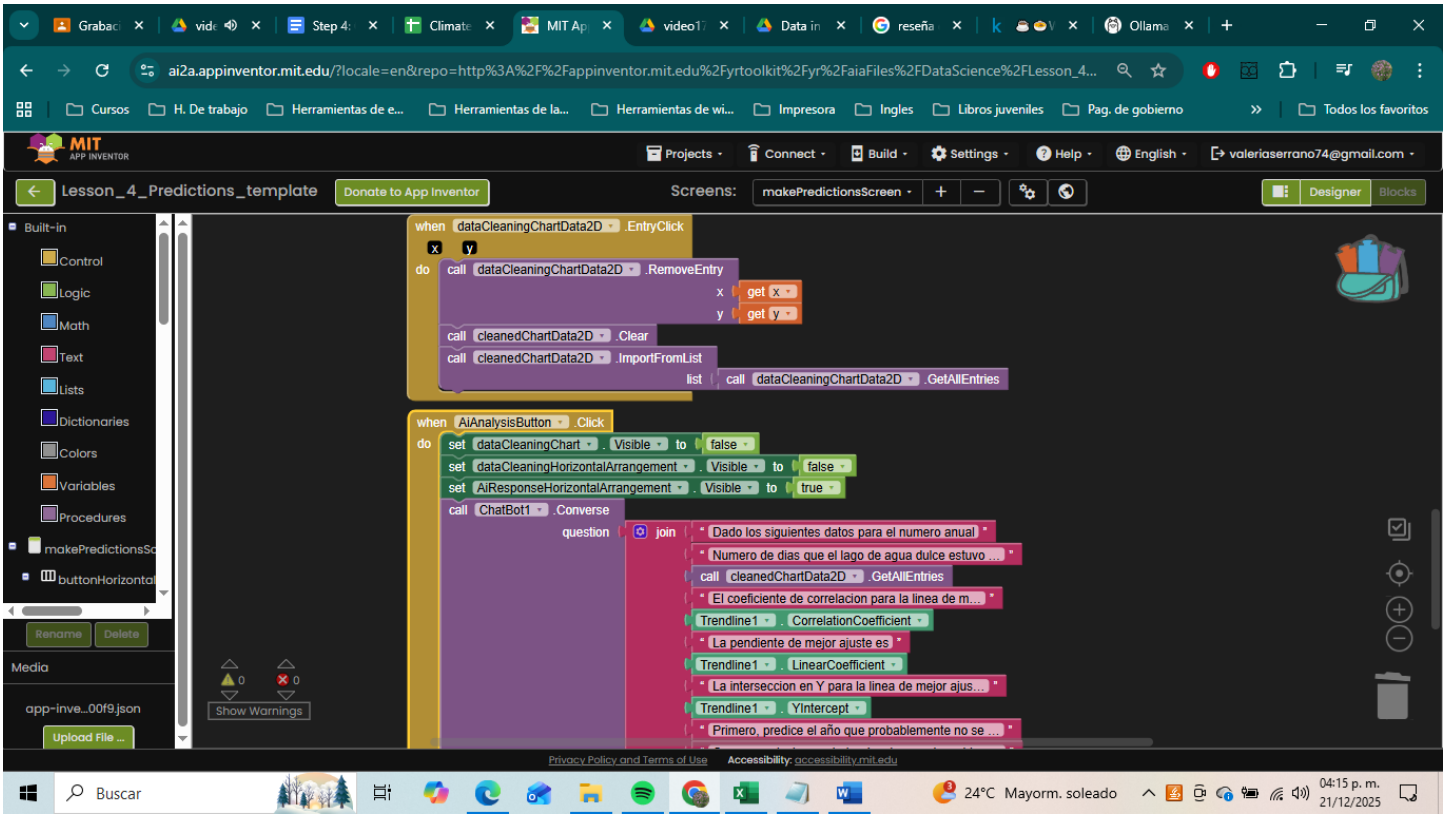
DrawLOBFscreen

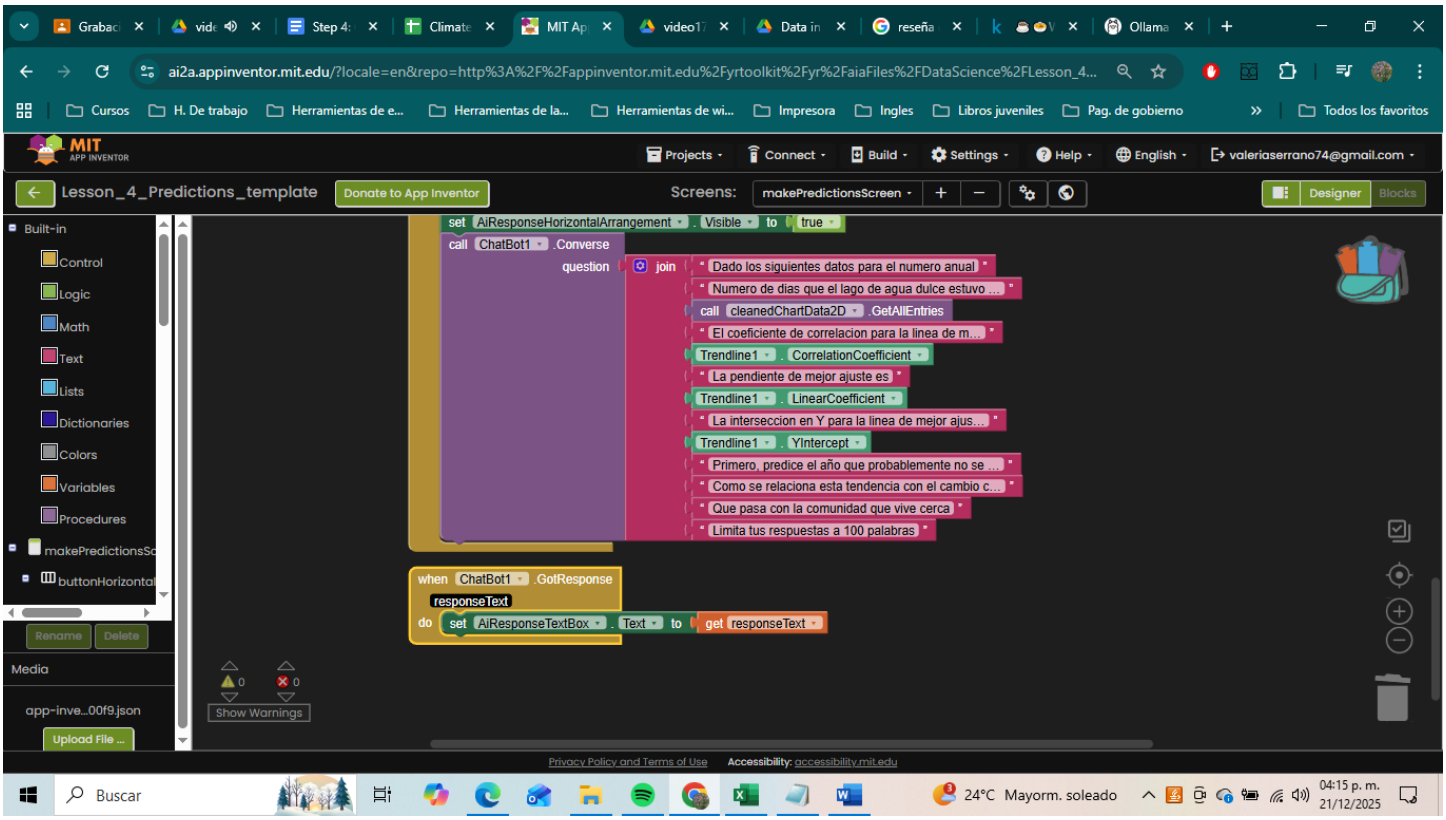


MakePredictionsScreen




Lesson_4_Predictions_template
Donate to App Inventor
Screens:
makePredictionsScreen
Designer
Blocks
when drawLineOfBestFitButton .Click
do set Trendline1 . ChartData to cleanedChartData2D
when Trendline1 .Updated
results
do set SlopeValueLabel . Text to Trendline1 . LinearCoefficient
set Y_intValueLabel . Text to round Trendline1 . YIntercept
set Cor_coefValueLabel . Text to Trendline1 . CorrelationCoefficient
set X_IntValueLabel . Text to round Trendline1 . XIntercepts
call cleanedDataChart .ExtendDomainToInclude
x Trendline1 . XIntercepts
when detectAnomaliesButton .Click
do call dataCleaningChartData2D .HighlightDataPoints
dataPoints call AnomalyDetection1 .DetectAnomaliesInChartData
chartData dataCleaningChartData2D
threshold 2
color
Built-in
Control
Logic
Math
Text
Lists
Dictionaries
Colors
Variables
Procedures
Rename
Delete
Media
Show Warnings
Upload File ...
Privacy Policy and Terms of Use
Accessibility: accessibility.mit.edu


Lesson_4_Predictions_template
Donate to App Inventor
Screens:
makePredictionsScreen
Designer
Blocks
when dataCleaningChartData2D .EntryClick
x y
do call dataCleaningChartData2D .RemoveEntry
x get x
y get y
call cleanedChartData2D .Clear
call cleanedChartData2D .ImportFromList
list call dataCleaningChartData2D .GetAllEntries
when AiAnalysisButton .Click
do set dataCleaningChart . Visible to false
set dataCleaningHorizontalArrangement . Visible to false
set AiResponseHorizontalArrangement . Visible to true
call ChatBot1 .Converse
question join "Dado los siguientes datos para el numero anual"
"Numero de dias que el lago de agua dulce estuvo ..."
call cleanedChartData2D .GetAllEntries
"El coeficiente de correlacion para la linea de m..."
Trendline1 . CorrelationCoefficient
"La pendiente de mejor ajuste es"
Trendline1 . LinearCoefficient
"La interseccion en Y para la linea de mejor ajus..."
Trendline1 . YIntercept
"Primero, predice el año que probablemente no se ..."
Built-in
Control
Logic
Math
Text
Lists
Dictionaries
Colors
Variables
Procedures
Rename
Delete
Media
Show Warnings
Upload File ...
Privacy Policy and Terms of Use
Accessibility: accessibility.mit.edu



Implementación en el teléfono:

4:02

Climate Data Predictions

Choose a Procedure:

Draw Line of Best Fit

Clean Data

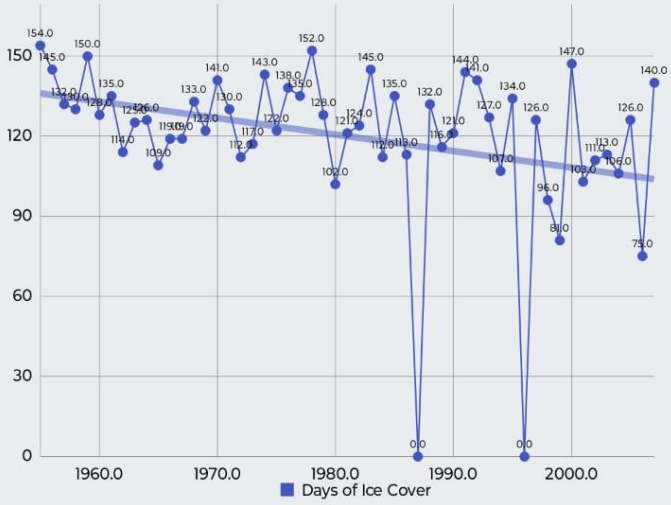
Make Predictions

4:02

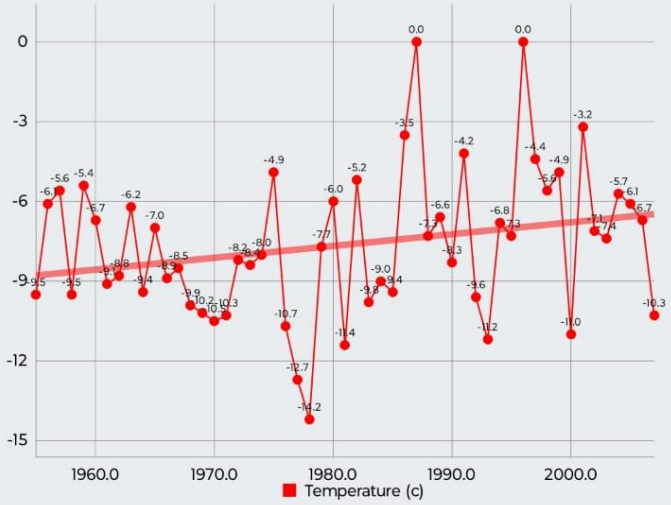
Climate Data: Create a Model

Home | Show Data | Draw Line of Best Fit

Spirit Lake, Orleans, Iowa



M = -0.6178 B = 1343.81229 R = -0.3279



M = 0.04448 B = -95.7545 R = 0.245

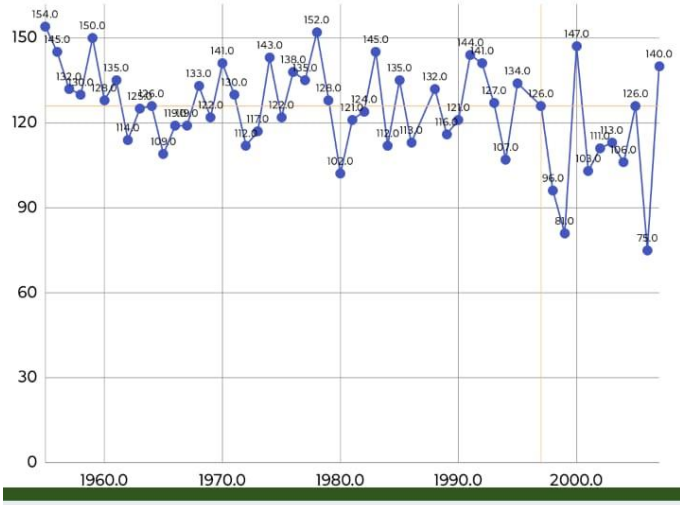
4:02

Climate Data: Cleaning the Data

Home | Show Data | Detect Anomalies | Draw Line of Best Fit

Spirit Lake, Orleans, Iowa

Data Cleaning: Click on anomalies in this window to remove.



M = -0.41578 B = 948.13964 R = -0.38536

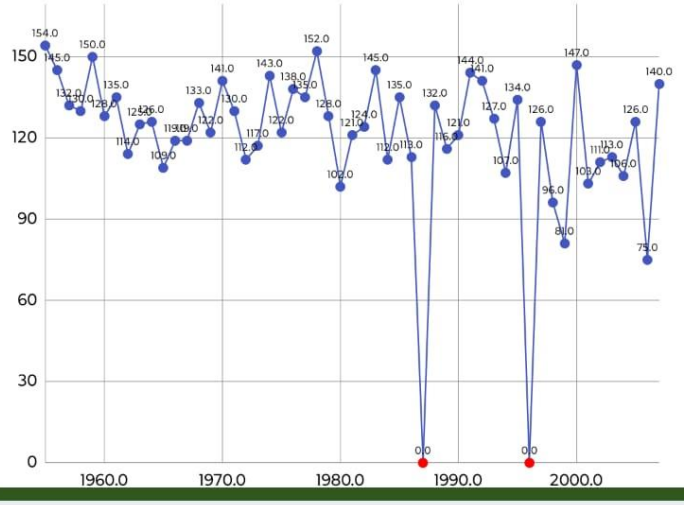
4:02

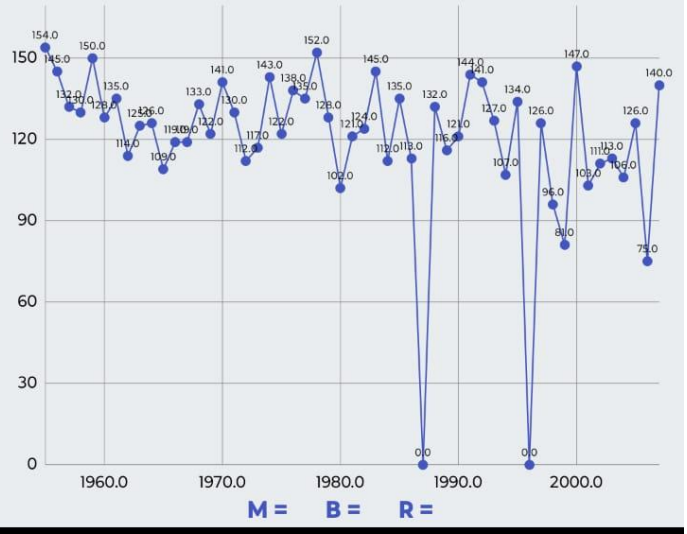
Climate Data: Cleaning the Data

Home | Show Data | Detect Anomalies | Draw Line of Best Fit

Spirit Lake, Orleans, Iowa

Data Cleaning: Click on anomalies in this window to remove.





M = B = R =

4:10
Climate Data: Making Predictions
Home
Show Data
Detect Anomalies
Draw LOBF
AI Analysis
Spirit Lake, Orleans, Iowa
Basándonos en los datos, el lago probablemente no se congele en el futuro. La disminución en el número de días de congelamiento sugiere un calentamiento global.
Este cambio climático afecta negativamente a la comunidad local: disminuye los recursos hídricos para pesca y agricultura, altera ecosistemas, aumenta riesgos de inundaciones y erosiones.
150
120
90
60
30
0
1960.0
1970.0
1980.0
1990.0
2000.0
M =
B =
R =
X-Int =
4:01
Climate Data: Making Predictions
Home
Show Data
Detect Anomalies
Draw LOBF
AI Analysis
Spirit Lake, Orleans, Iowa
Basado en la pendiente y la intersección de la línea de mejor ajuste, predecimos que el lago podría no congelarse alrededor del año 2035-2040.
Esta tendencia negativa se relaciona con el cambio climático ya que el aumento de las temperaturas globales provoca que los lagos se congelen por períodos más cortos. La comunidad que vive cerca podría experimentar impactos como la reducción de recursos hídricos, alteraciones en la vida silvestre y riesgos para la infraestructura.
150
120
90
60
30
0
1960.0
2000.0
2040.0
2080.0
2120.0
2160.0
M = -0.6178
B = 1344
R = -0.3279
X-Int = 2175