Finding Our Paradise

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Our Focus

- Dial in the data
- Weigh the input data
- Add New Aspects

Solution #1
Health

- Type of Health Data

- Accidental Deaths

Solution #2
Crime

- Add a heat map for the types of crime

- Violent Crime is Worse than Property Crime

```
IMPORT Spring2023_Hackathon.FindOurParadise.Datasets.File_NewHealth, STD;

AccidentalDeaths := File_NewHealth.File;

Min_Year := MIN(AccidentalDeaths, (INTEGER)Year)-1;
Max_Year := MAX(AccidentalDeaths, (INTEGER)Year);
OUTPUT(Min_Year, NAMED('MIN'));
OUTPUT(Max_Year, NAMED('MAX'));

DeathRates := RECORD
    AccidentalDeaths.State,
    AccidentalDeaths.Year,
    // Max year is 2020, Min Year is 2004.
    // If data point year is 2014, 2014 - 2004 - 1 = 9,
    // divide by 16 to get a weight to apply to the rate.
    REAL weighted_Rate := (INTEGER)(AccidentalDeaths.Rate) * (((INTEGER)AccidentalDeaths.Year - Min_Year) / (Max_Year - Min_Year))
END;

DeathTab := TABLE(AccidentalDeaths, DeathRates);
OUTPUT(SAMPLE(DeathTab, 5), NAMED('NewHealth'));

// AggregateHealth := RECORD
//     AccidentalDeaths.State,
//     TotalAccidentRate := SUM(GROUP, DeathTab.weighted_Rate),
// END;

// AggHealthTab := TABLE(DeathTab, AggregateHealth, State);

AggHealthTab := TABLE(DeathTab, {
                                 State,
                                 AggAccidentRate := (INTEGER)SUM(GROUP, weighted_Rate)
                                },
                                State);
```

```
IMPORT $, STD;

UnemployementRate := $.File_Unemployement.File;

UnemploymentRec := RECORD
    STRING2 State := UnemployementRate.state_abrv,
    UnemployementRate.rate_diff
END;

UnemploymentTab := TABLE(UnemployementRate, UnemploymentRec);

AggUnemployementRate := TABLE(UnemploymentTab,
                              {
                                  State,
                                  Agg_rate_diff := SUM(GROUP, (DECIMAL2_1)rate_diff)
                              }, State);

OUTPUT(AggUnemployementRate, NAMED('UnemRate'));
OUTPUT(AggUnemployementRate,,'~FYP::Main::Hacks::TeamFriendshipEmploymentData',NAMED('NewEmploymentData'),OVERWRITE);
```

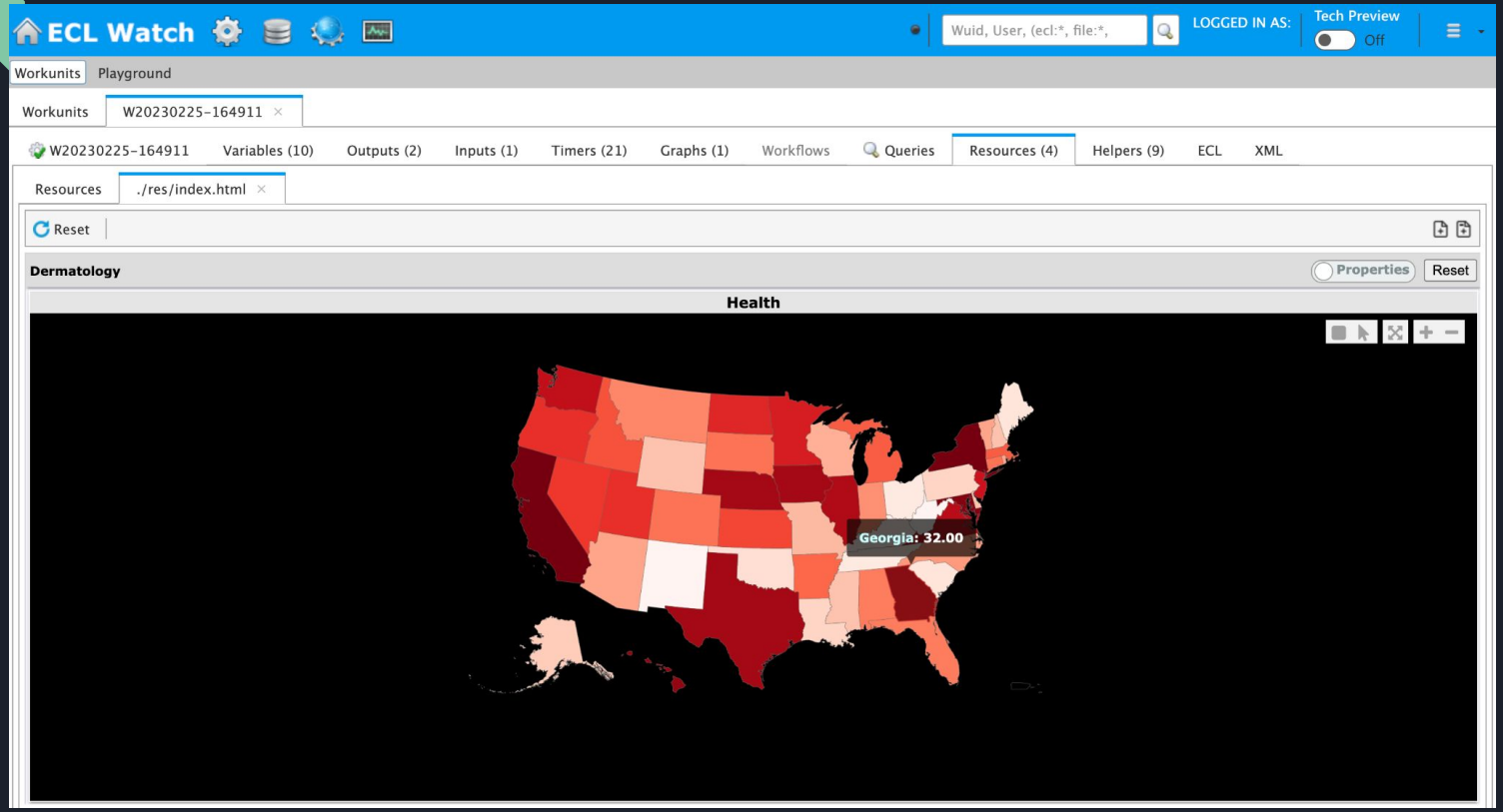
Accidental Death Scoring

```
AccumulateAccidentScore := ITERATE(SORT(Temp, -AggAccidentRate),
                                   TRANSFORM(HealthScoreRec,
                                       SELF.AccidentScore := IF(LEFT.AggAccidentRate = RIGHT.AggAccidentRate,
                                           LEFT.AccidentScore, LEFT.AccidentScore+1),
                                       SELF := RIGHT));
```

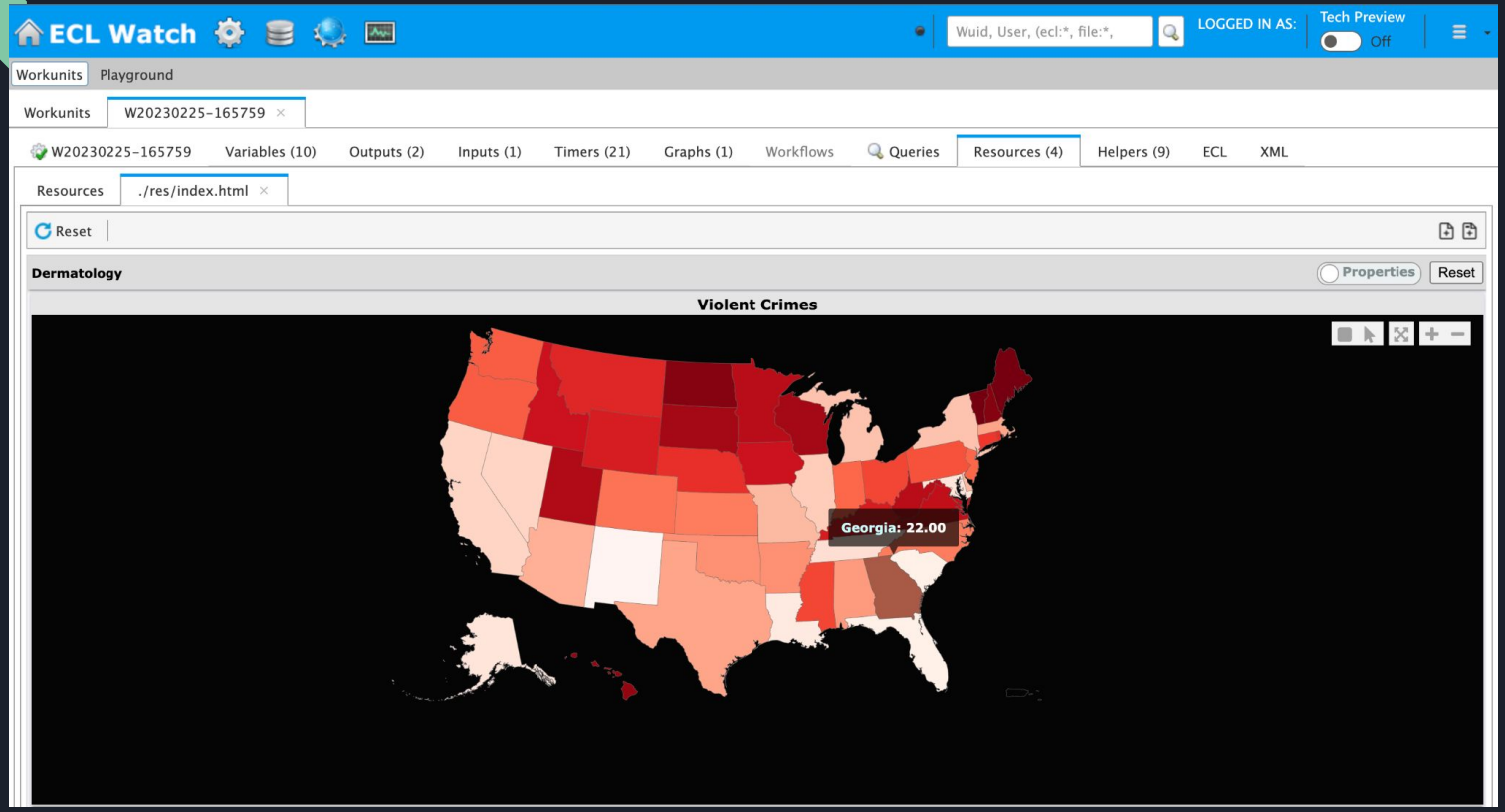
Unemployment Scoring

```
AccumulateUnemploymentScore := ITERATE(SORT(Temp, -Agg_rate_diff),
                                       TRANSFORM(UnemploymentScoreRec,
                                           SELF.UnemploymentScore := IF(LEFT.Agg_rate_diff = RIGHT.Agg_rate_diff,
                                               LEFT.UnemploymentScore, LEFT.UnemploymentScore+1),
                                           SELF := RIGHT));
```

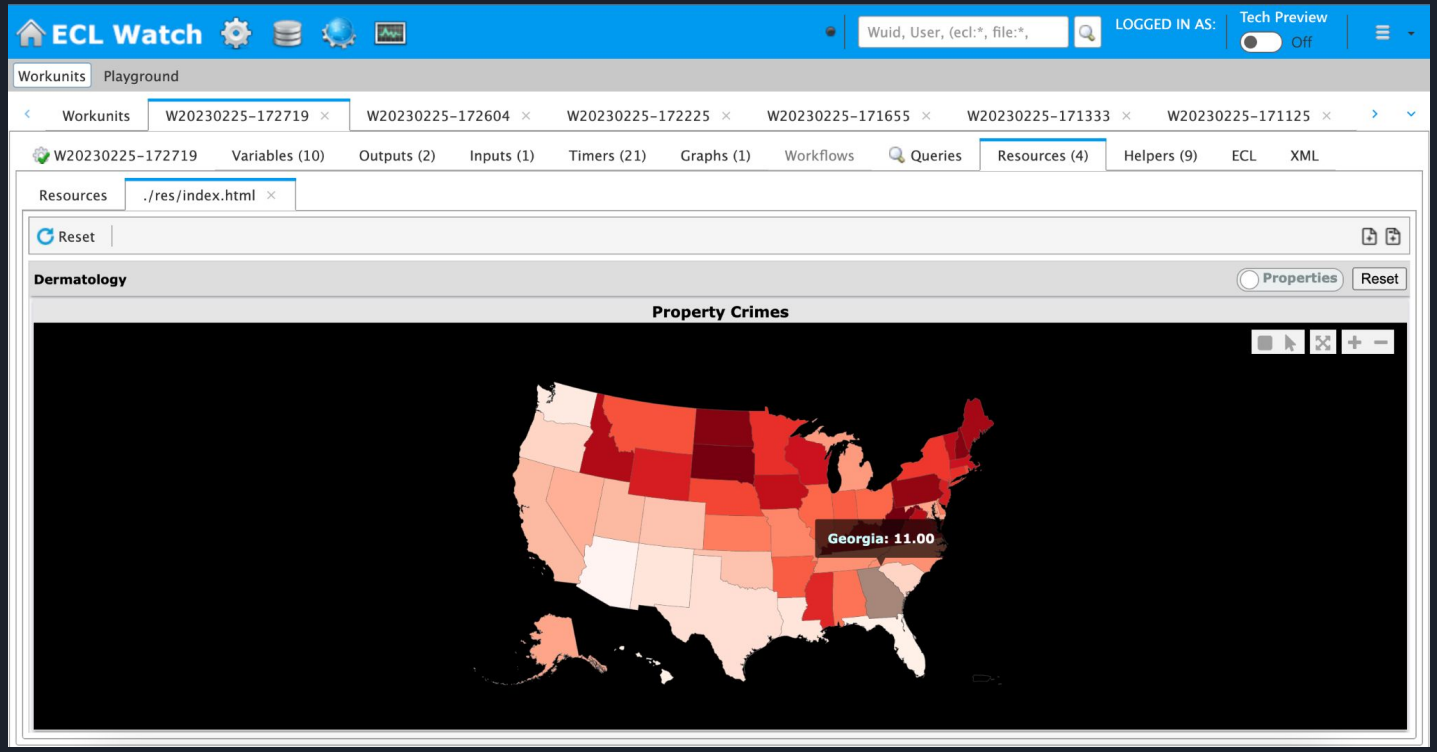
Visualization of Health



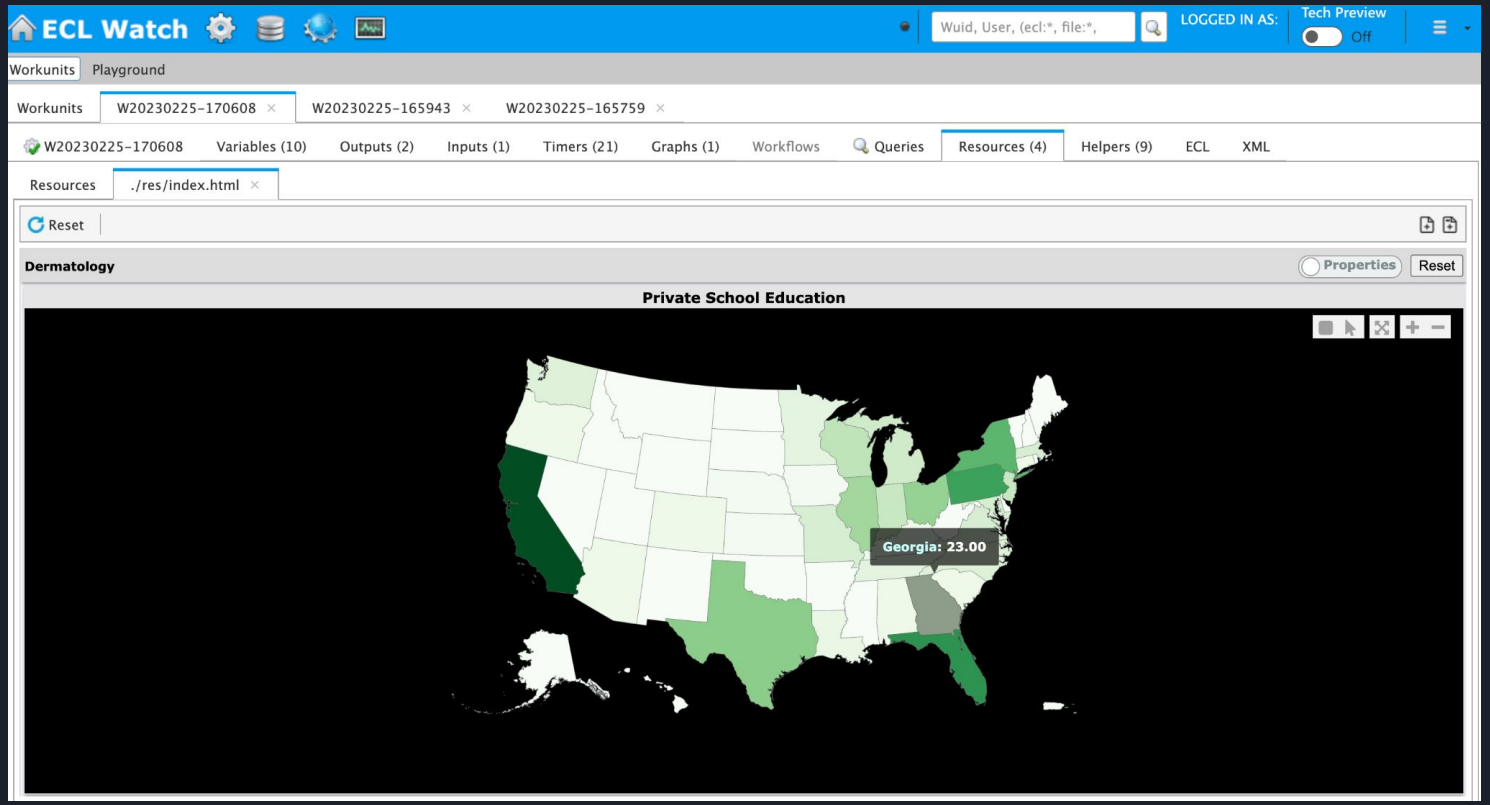
Visualization of Violent Crimes



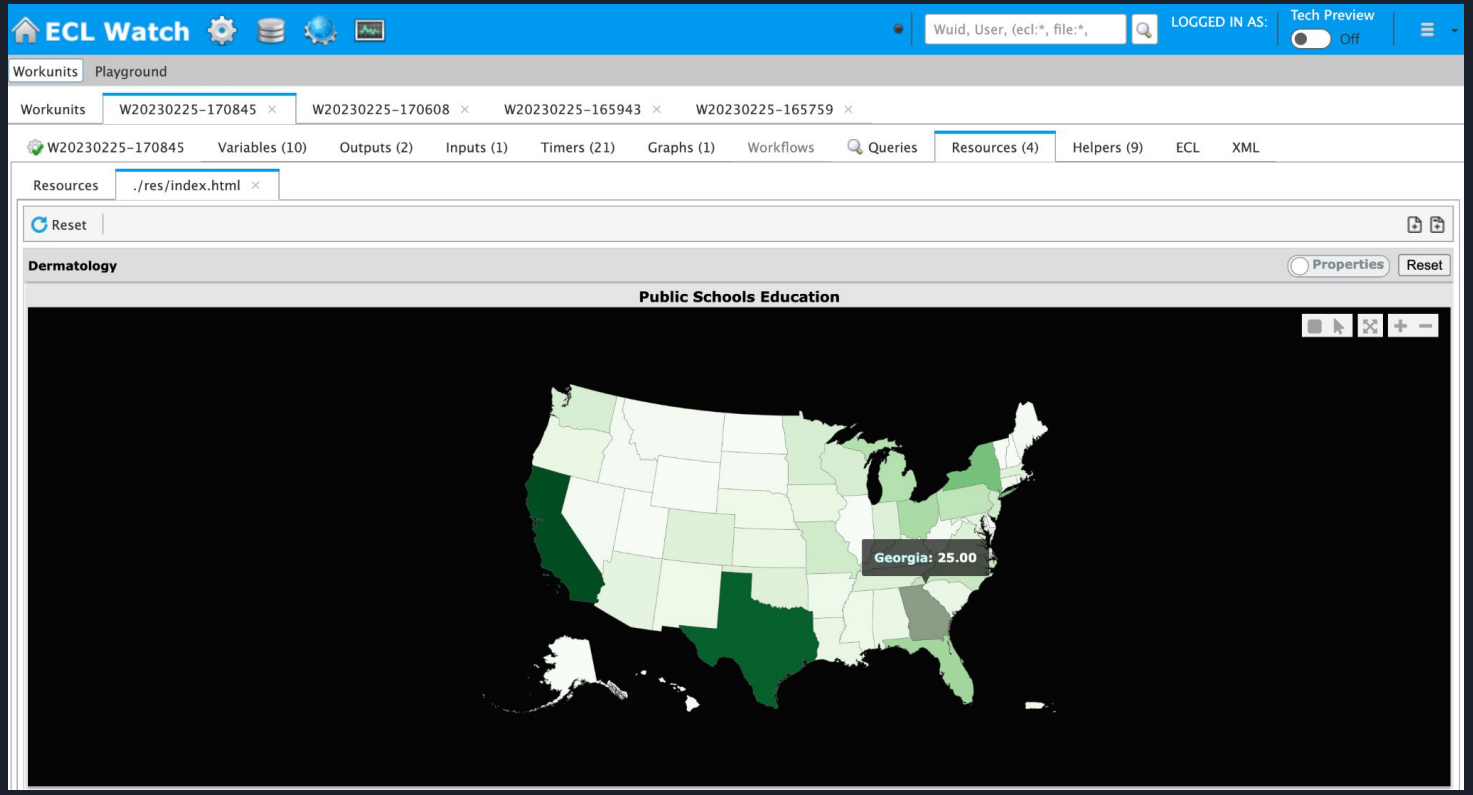
Visualization of Property Crimes



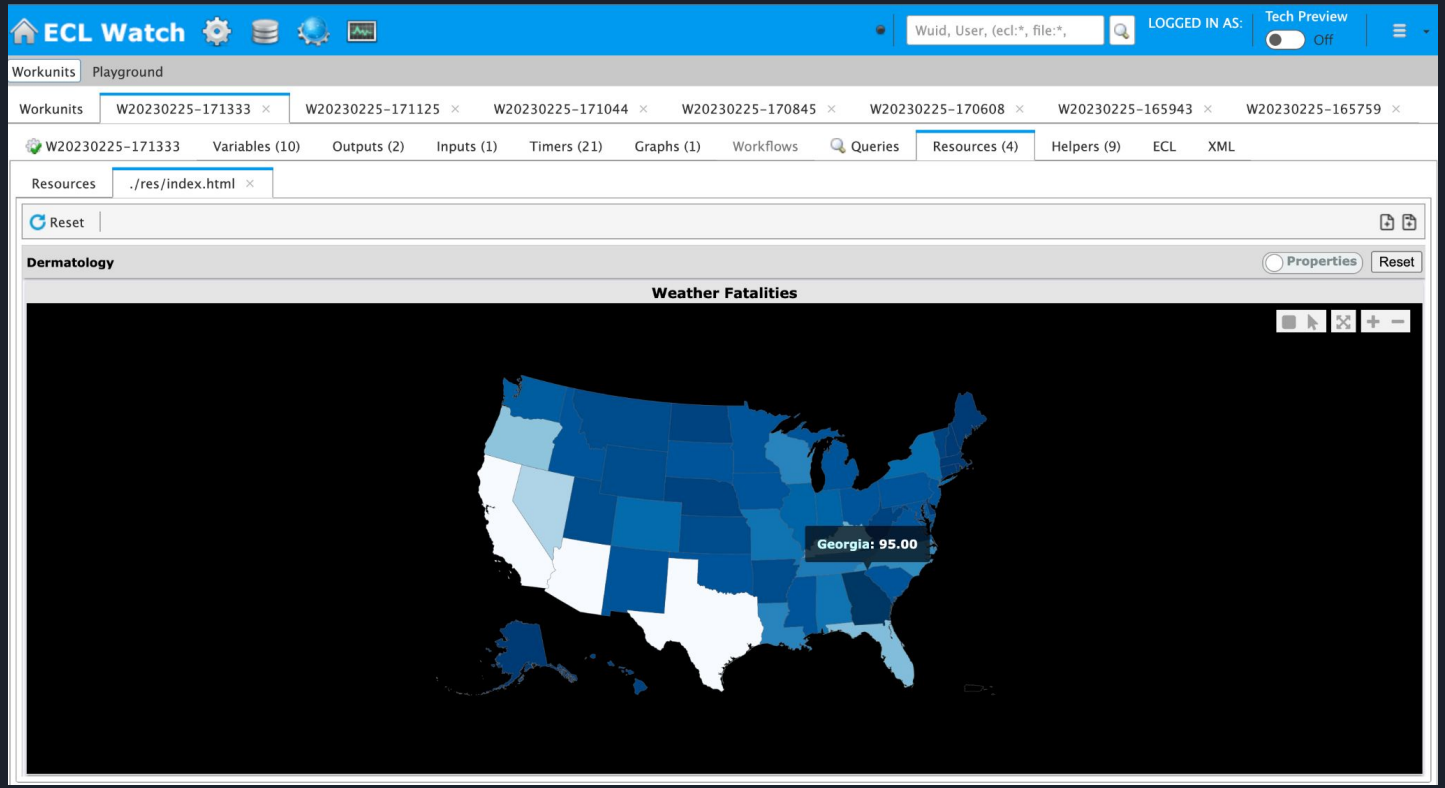
Visualization of Private Schools



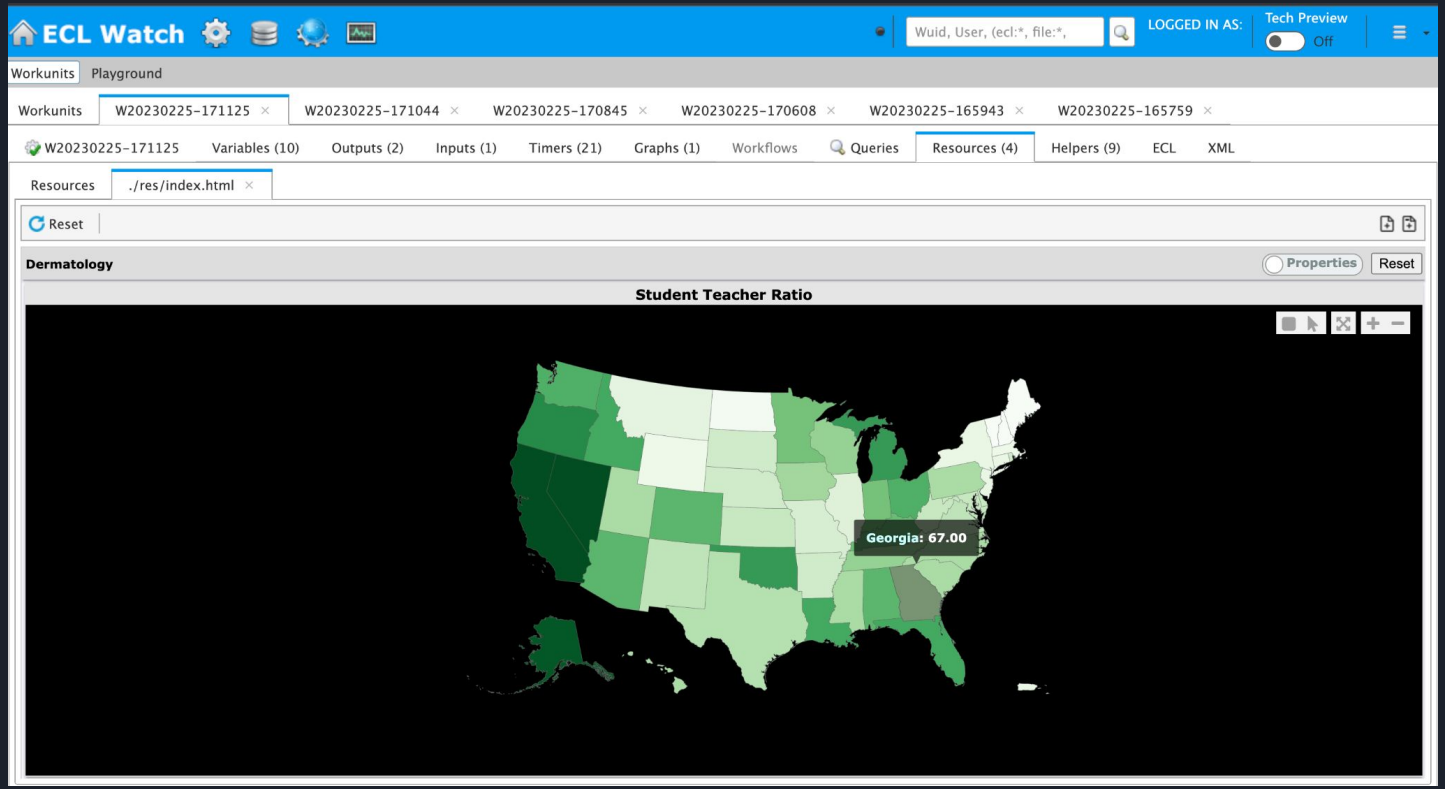
Visualization of Public Schools



Visualization of Weather Fatalities



Visualization of Student to Teacher ratio



Our Paradise

	paradisescore	state	statename
1	100	ND	North Dakota
2	92	IA	Iowa
3	90	NE	New England
4	90	VA	Virginia
5	90	MA	Massachusetts
6	85	NH	New Hampshire
7	82	ID	Idaho
8	82	VT	Vermont
9	80	SD	South Dakota
10	80	CT	Connecticut