Researching the Causes of Air Pollution Across the U.S.

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How is air quality measured?

| Daily AQI Color	Levels of Concern	Values of Index	Description of Air Quality
		AQI Basics for Ozone and Particle Pollution	
Green	Good	0 to 50	Air quality is satisfactory, and air pollution poses little or no risk.
Yellow	Moderate	51 to 100	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Orange	Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Red	Unhealthy	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Purple	Very Unhealthy	201 to 300	Health alert: The risk of health effects is increased for everyone.
Maroon	Hazardous	301 and higher	Health warning of emergency conditions: everyone is more likely to be affected.

Figure 1: Air Quality Index (EPA)
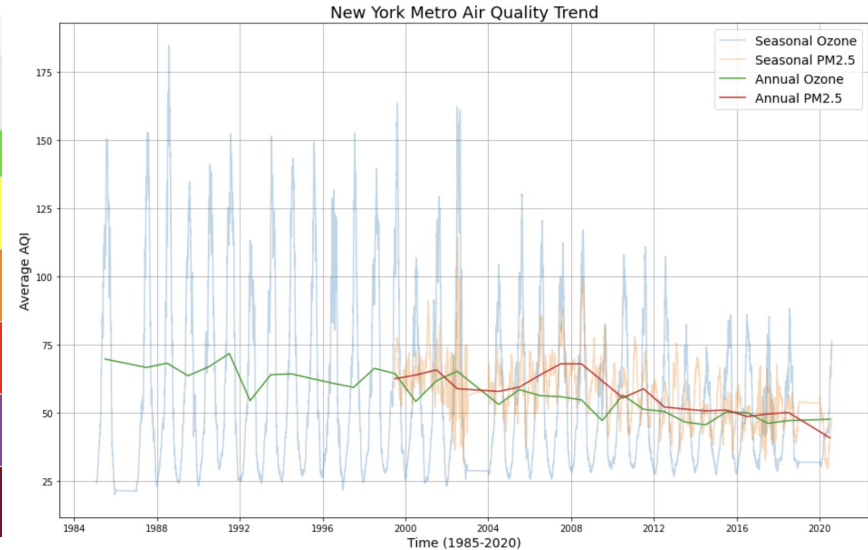
Figure 2: New York MSA Air Quality Trend of O3 and PM2.5, 1985-2020
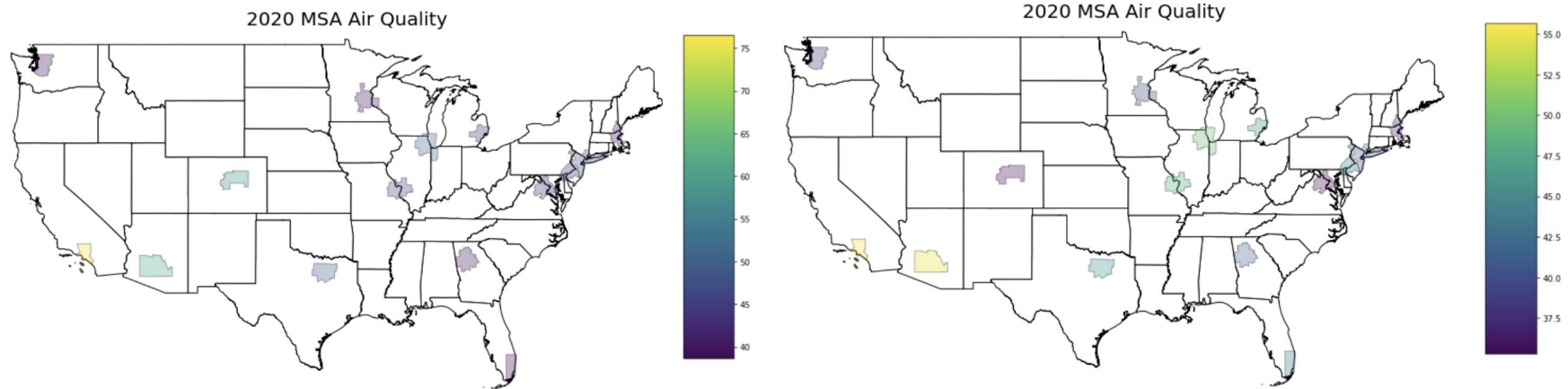
Air quality across the U.S.

Figure 3: Map visualizations of O3 (left) and PM2.5 (right) across the United States MSAs in 2020
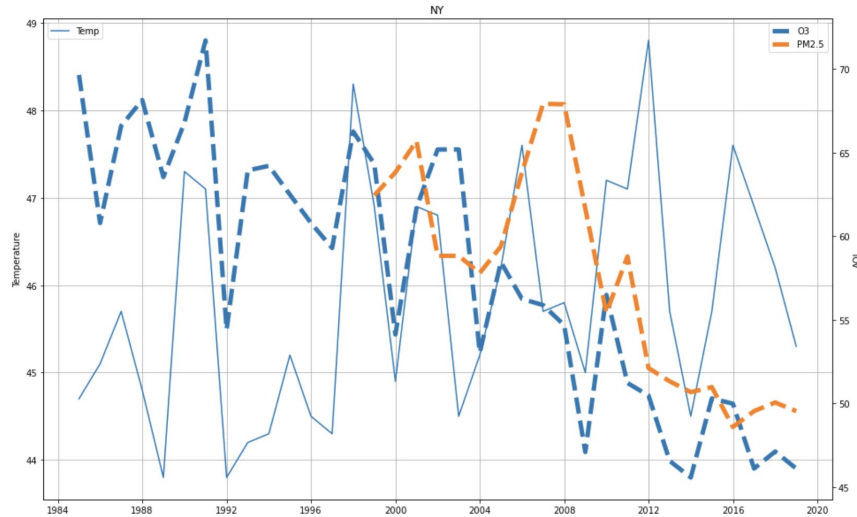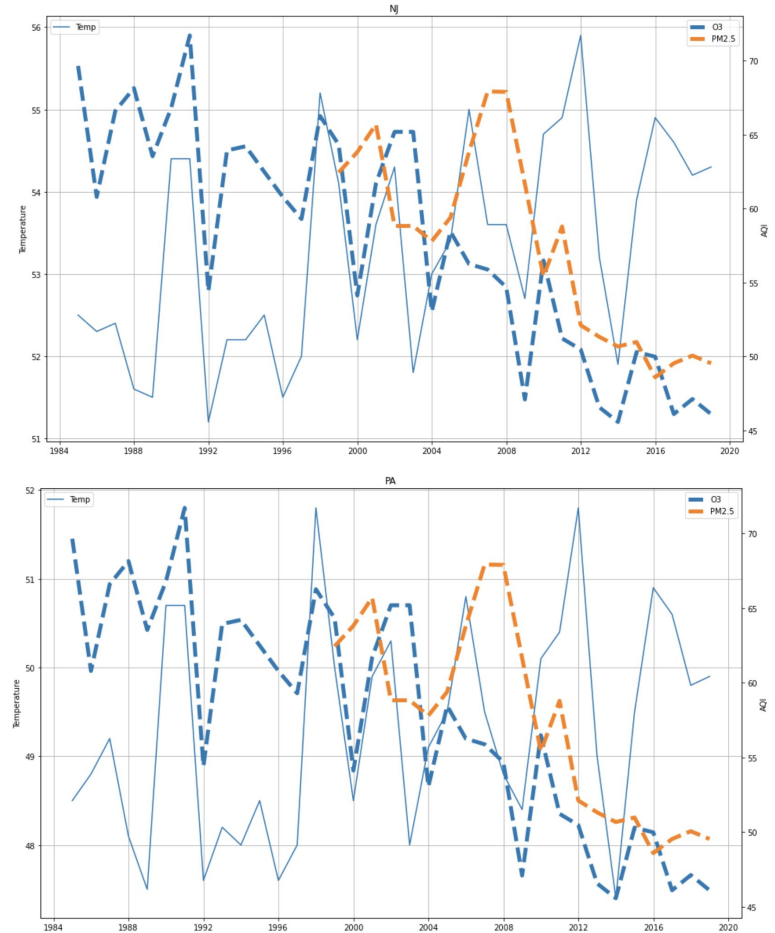
Temperature to air quality (½)

Figure 4: Line plots of NY-NJ-PA of temperature to air quality (1985-2020)
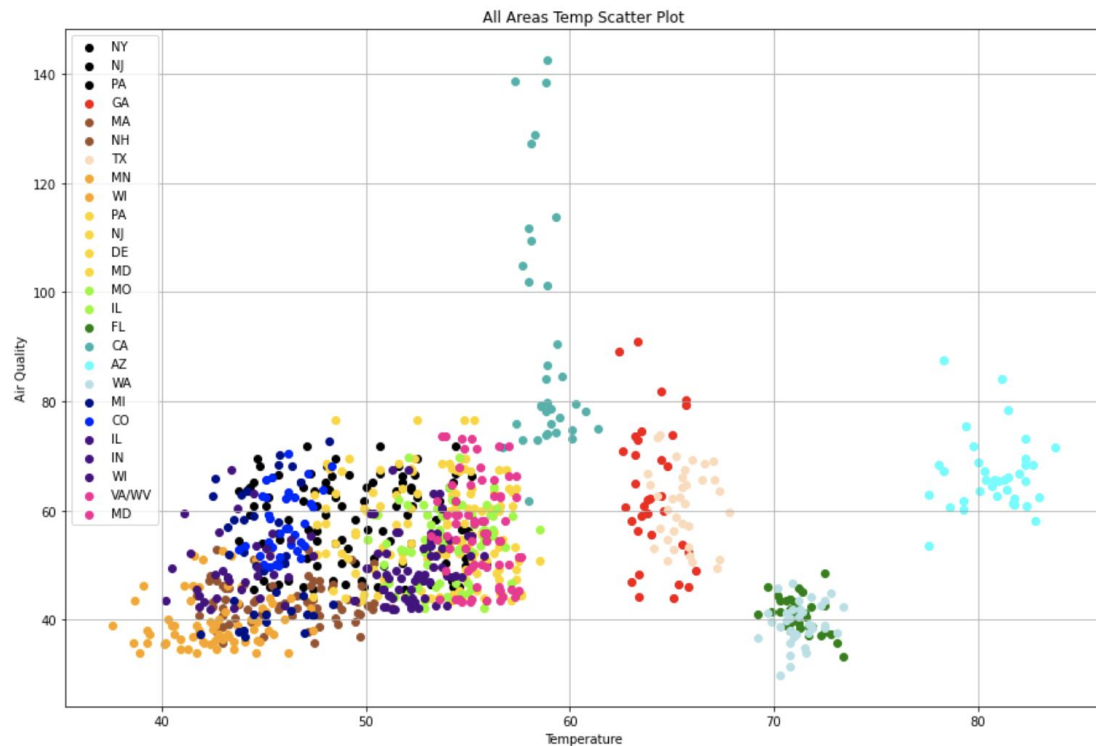
Temperature to air quality (2/2)

Figure 5: Scatter plot of states to metro air quality
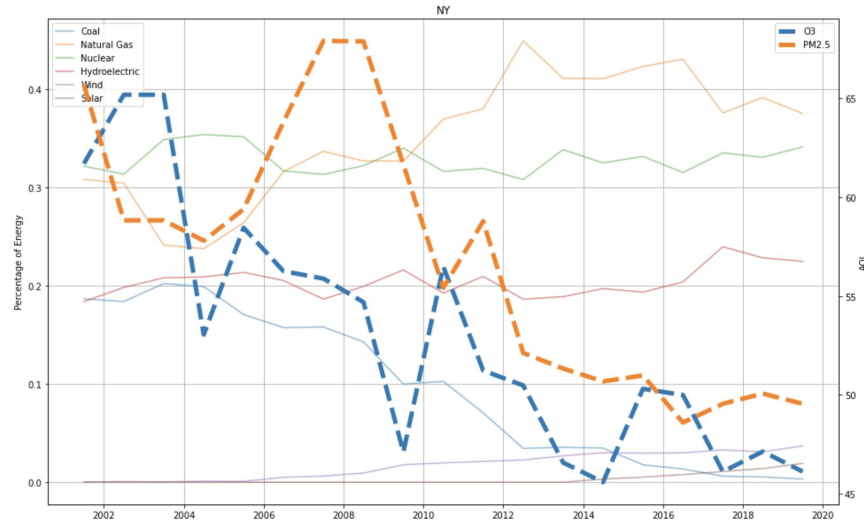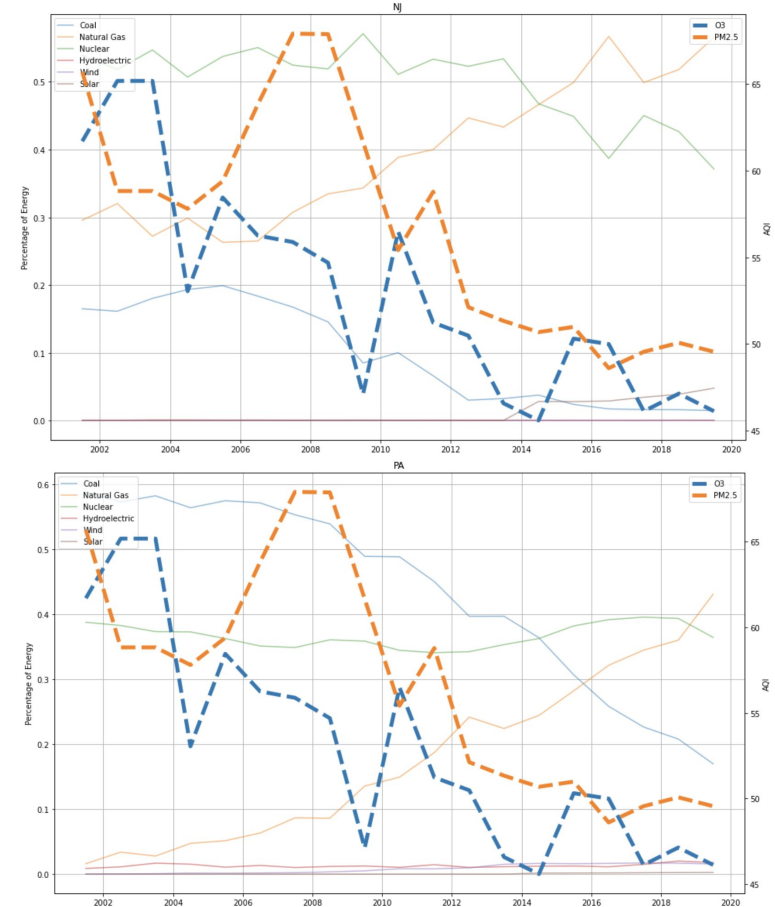
Energy consumption (½)

Figure 6: Energy consumption of the New York MSA (2001-2019)
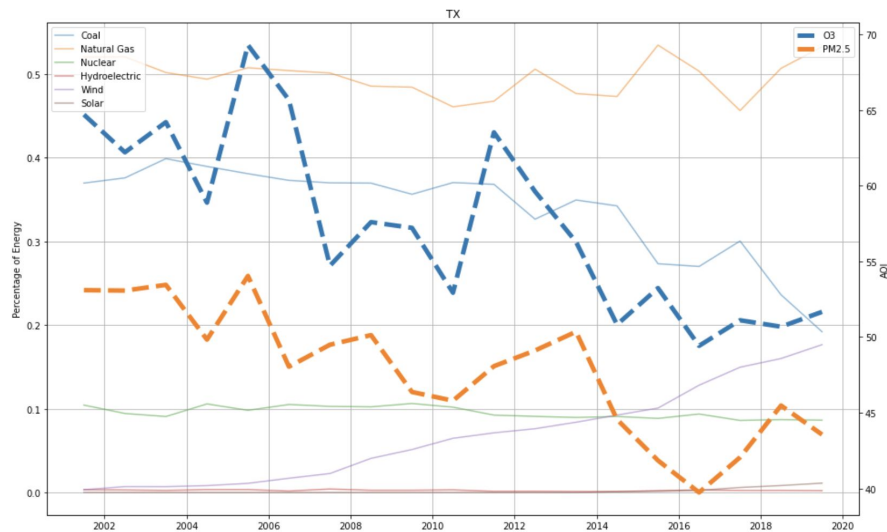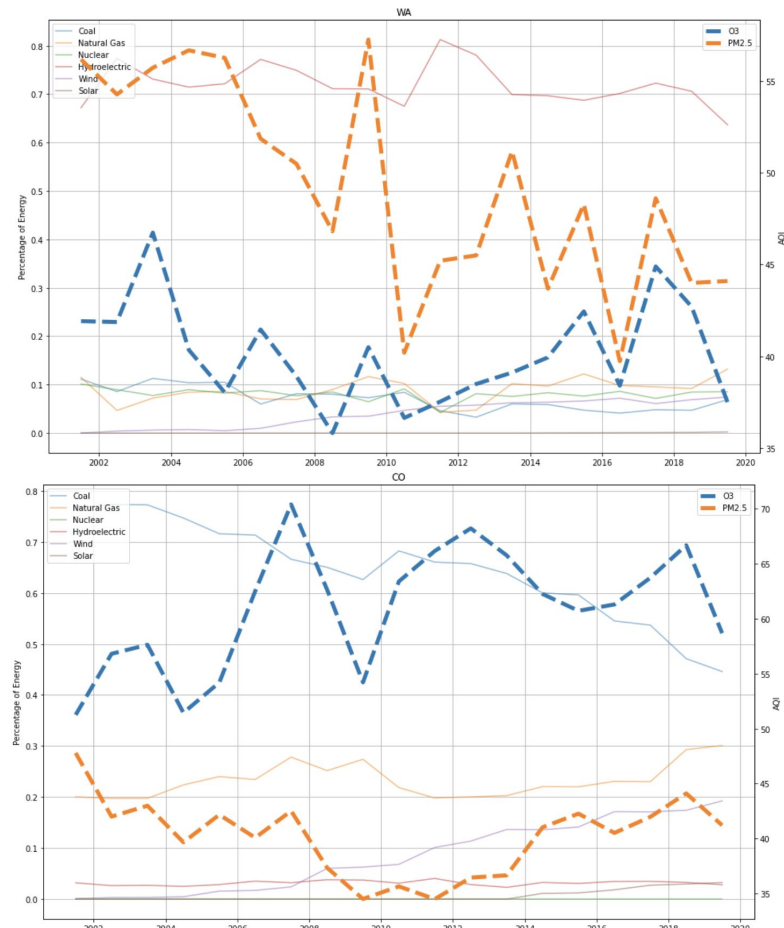
Energy consumption (2/2)

Figure 7: Energy consumption of the Dallas, Seattle, and Denver MSAs (2001-2019)
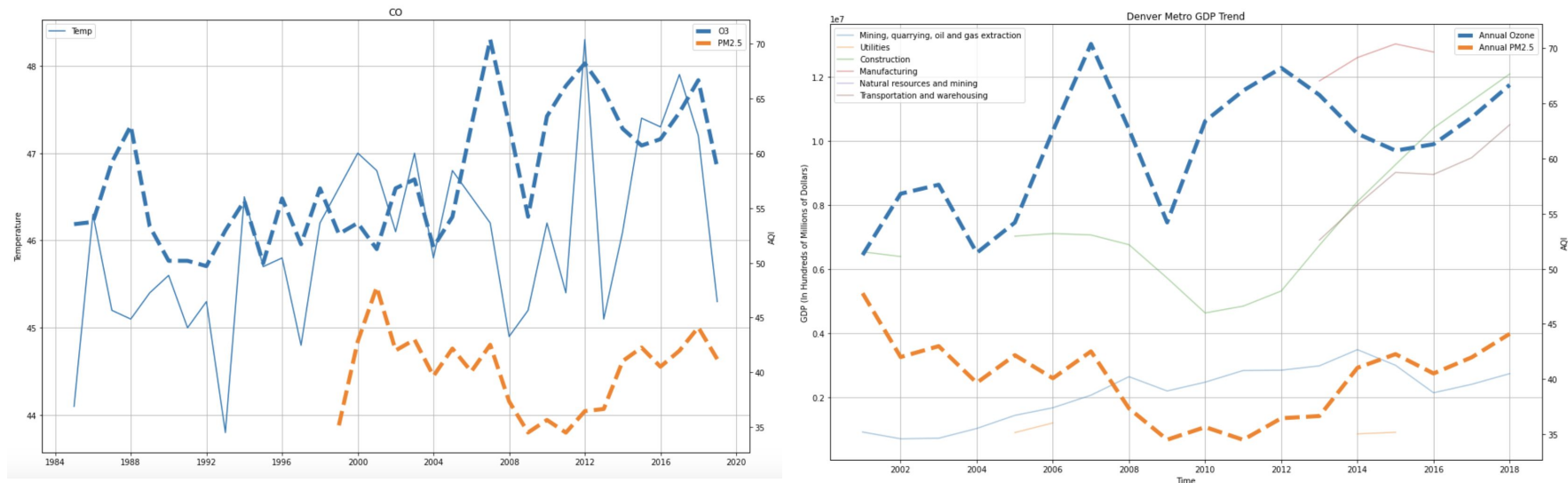
GDP and production by industry (1/3)

Figure 8: Temperature (left) and GDP (right) trends of Denver MSA

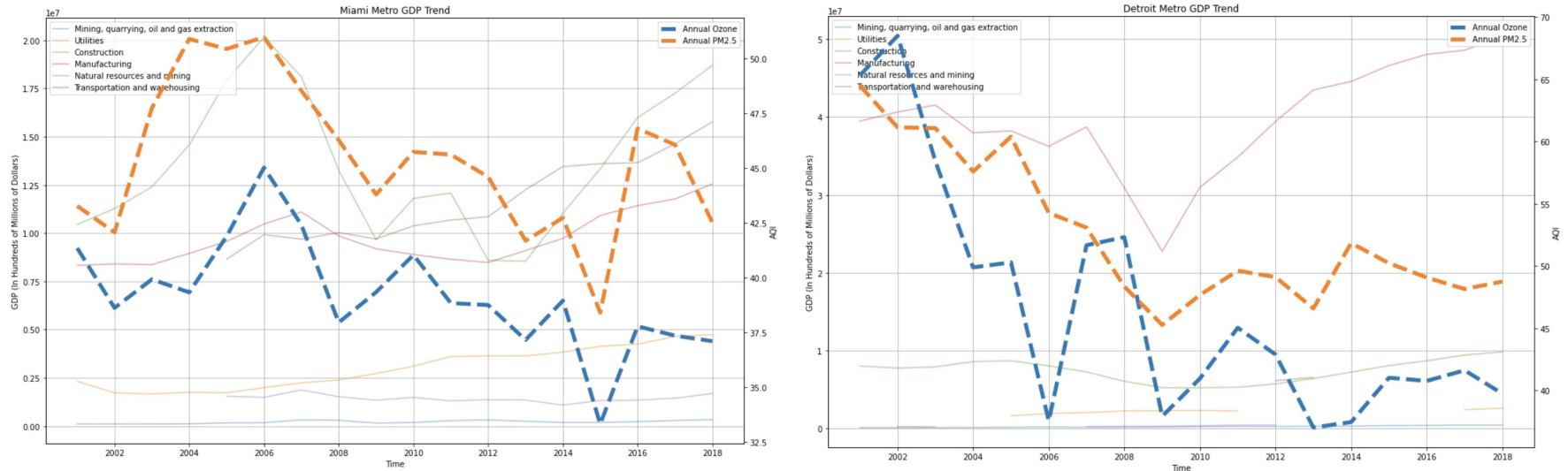# GDP and production by industry (2/3)

Figure 9: Miami (left) and Detroit (right) MSA GDP trends (2001-2019)

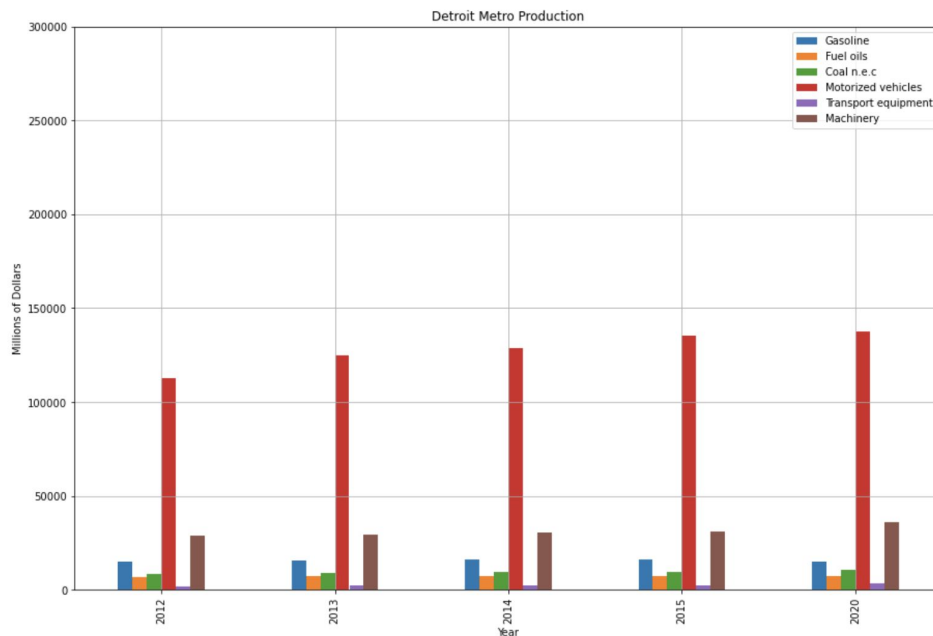# GDP and production by industry (3/3)

Figure 10: Detroit MSA production (2012-2015, 2020)
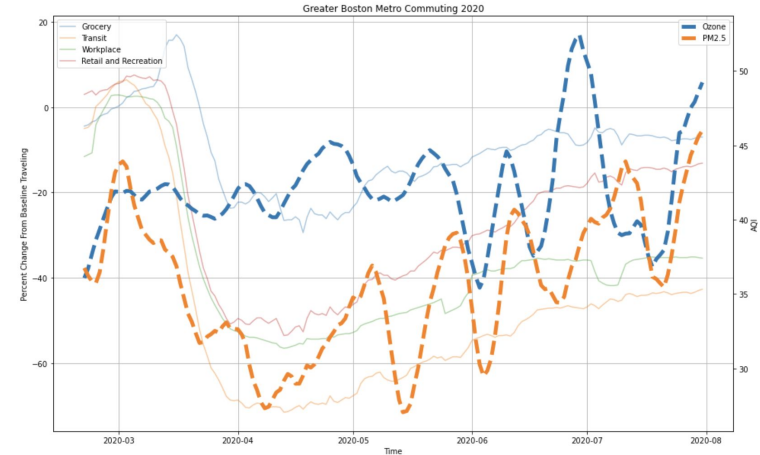
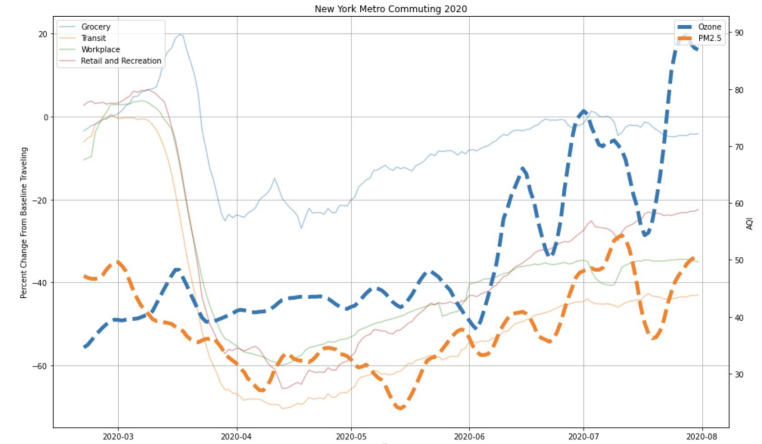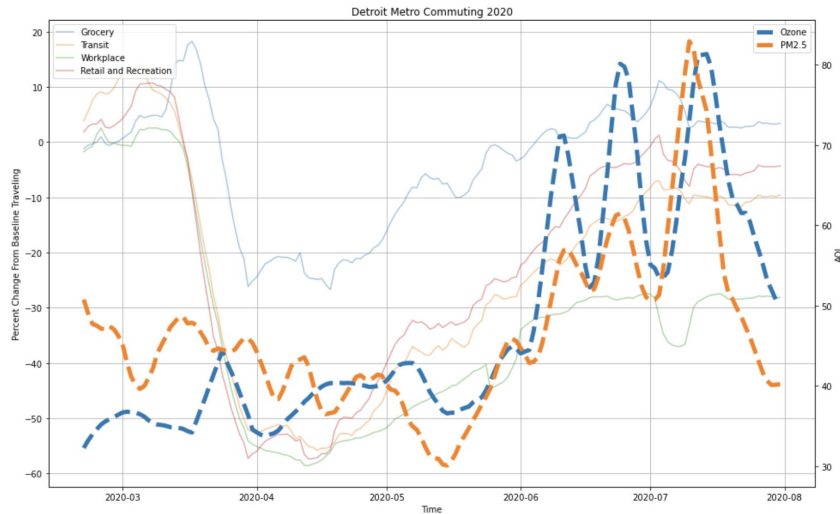# Commuting trends of COVID-19 (1/3)

Figure 11: Commuting trends for Detroit, New York, and Greater Boston MSAs (February 15-July 31st, 2020)
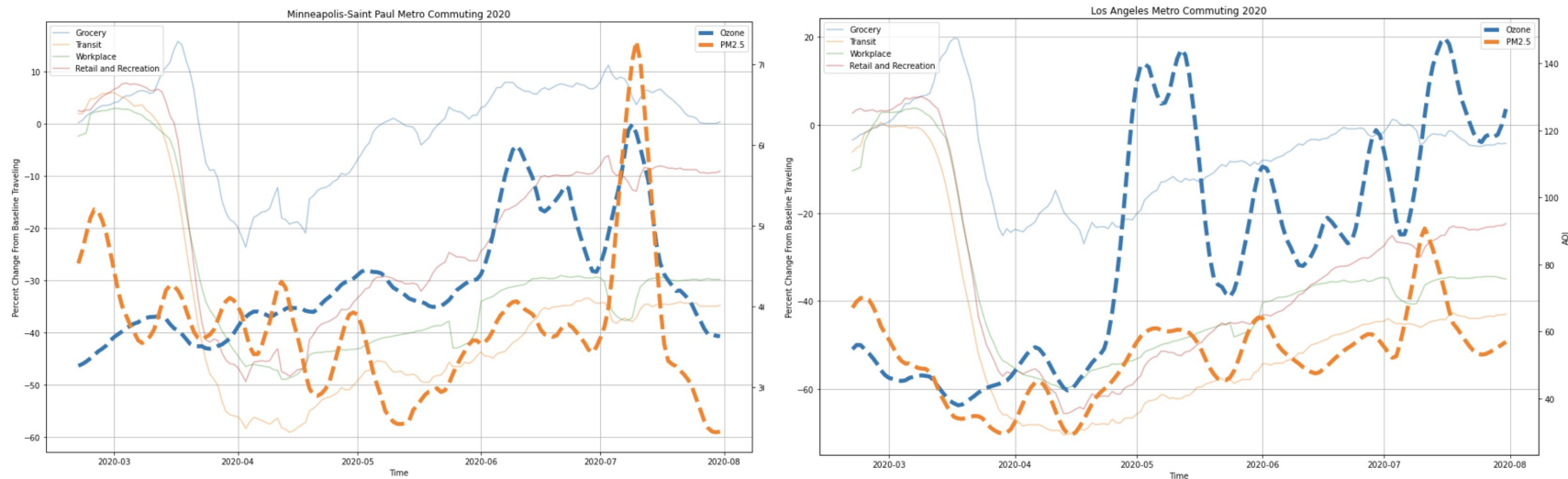
Commuting trends of COVID-19 (2/3)

Figure 12: Commuting trends for Minneapolis (left) and Los Angeles (right) MSAs (February 15-July 31st, 2020)
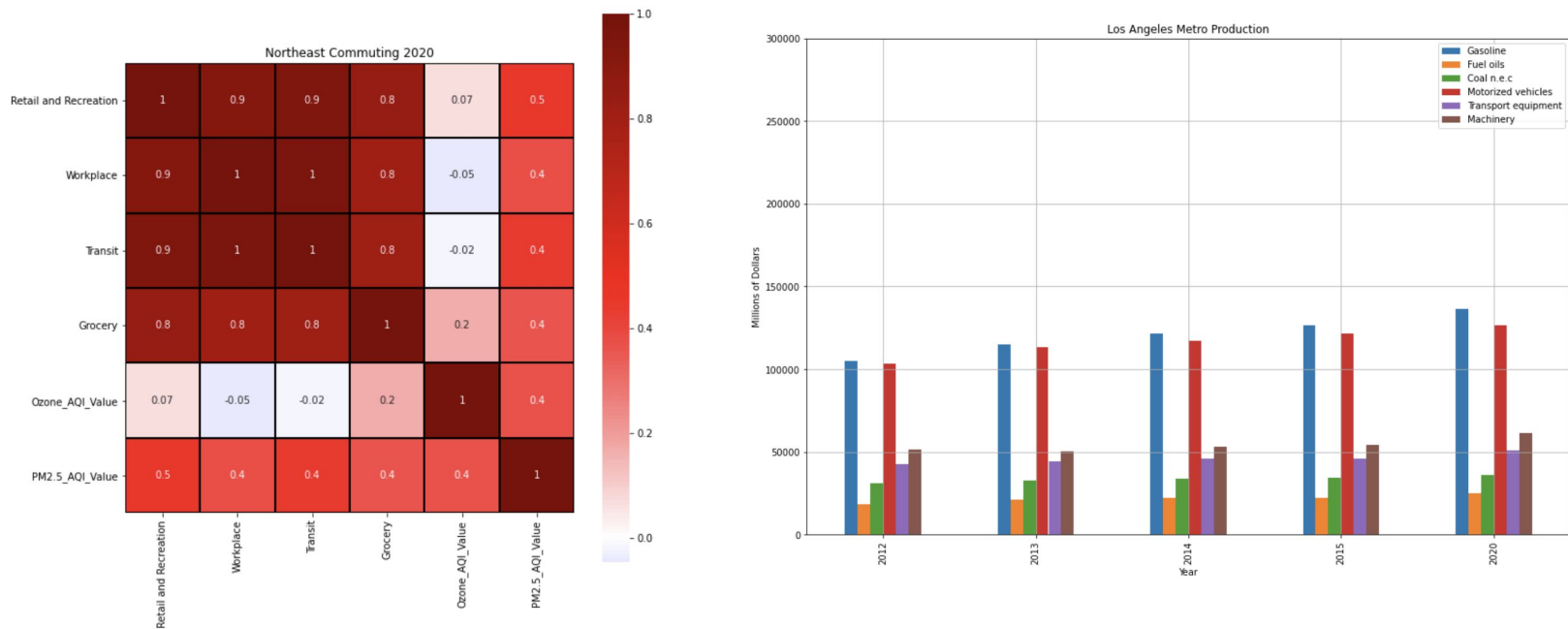
Commuting trends of COVID-19 (3/3)

Figure 13: Northeast commuting correlation matrix (left) and Los Angeles MSA production (right)

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