



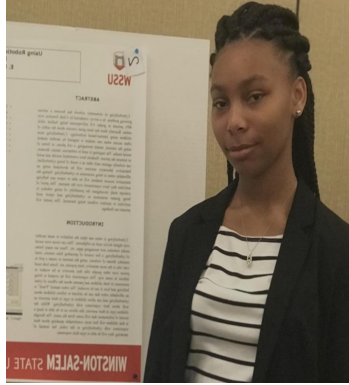
# COVID-19 Hospital Visualization

By Caleb Anderson, Nia Blake, Trent Gaylord, and Kobe Lawson-Chavanu

# Team Humble



Caleb Anderson



Nia Blake



Trent Gaylord

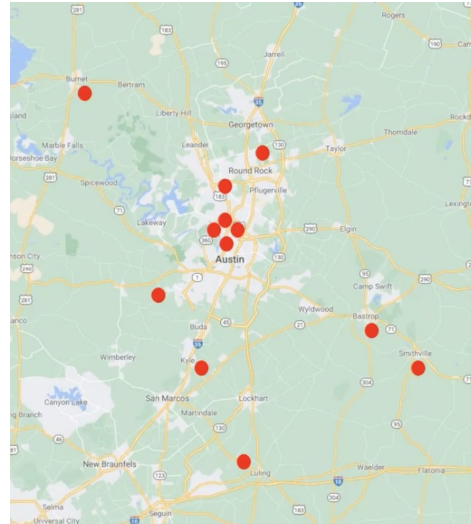


Kobe Lawson

**Mentors: La Keisha Barlow, & Charlie Dey**

# Data Set

- Hospital employee scheduling
- 12 hospitals in Austin TX area
- As necessary employees or PRN
- Needs and Fills
- Nurse specialties
- Spreadsheet



350 Staff Members

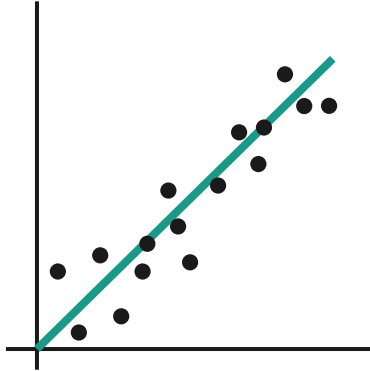
20 Roles

9 Nurse Specialties  
(ICU, ED, Mother and Baby, etc)

# Project Goals



Data Visualization



Need Prediction



Front End GUI

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# Project Software



## Google Cloud

- CSV Storage
- HPC Software



## Jupyterlab

- Python Environment
- Markdown
- Runs in GC



## Plotly

- Light graphing software
- Python library
- Runs in Jupyterlab & Anvil



## Anvil

- Web app development
- Python Environment
- Uplink to Jupyterlab

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# Implementation





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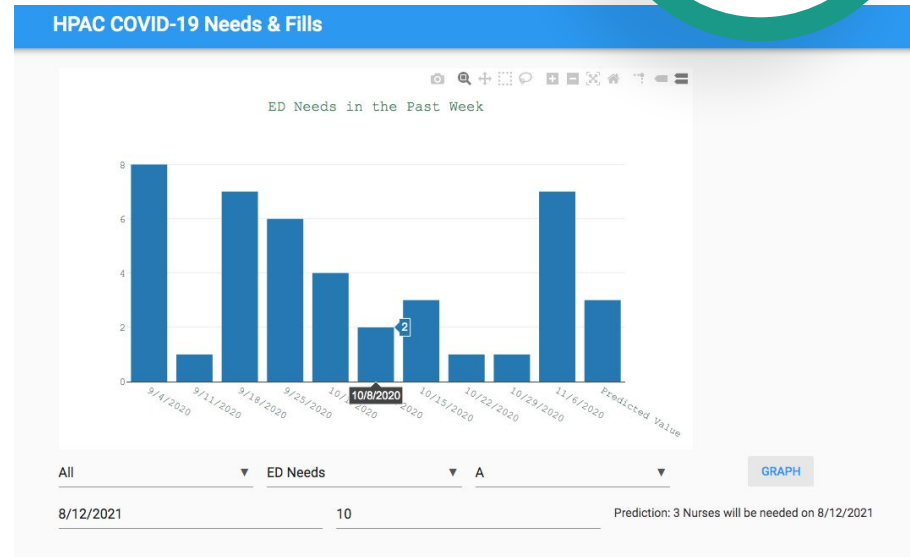
## Code Overview:

- Normalize data
- Linear Regression
- Plotly graph



## User Interface:

- Anvil links to Jupyter Notebook
- Calls primary function
  - Front end arguments -> Back end parameters
- Receives graphing data
- Graphs function w/ Plotly

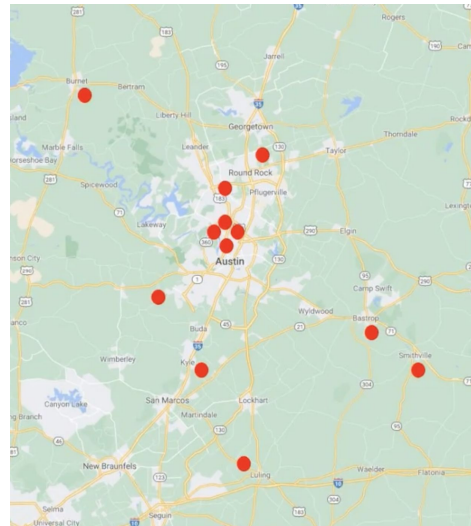


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# Project Future

# Project Impact:

- Predictions to better forecast needs with certain parameters
  - Based on site, specialty
- Atlanta Impact:
  - Similar hospital system



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Baby, etc)



# Future Plans

- Monthly heatmap
- Further Refine UI
- Messaging system



# Credits & Resources

**Github:**

<https://github.com/kobelschool/HPC-Hackathon-2020-COVID-19-Hospital-Statistics>

**Special Thanks to:**

**Mentors: La Keisha Barlow & Charlie Dey**

**Event Organizers: Jeaimé Powell & Gary Brantley**

**Sponsors: Cloudy Cluster, Intel, Omnibond, TACC, Globus and  
SGCI**