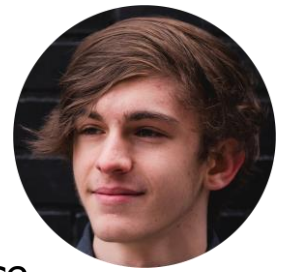


# Grady King



**Class:** Junior

**Hometown:** Morgantown, WV

**Major:** Data Science

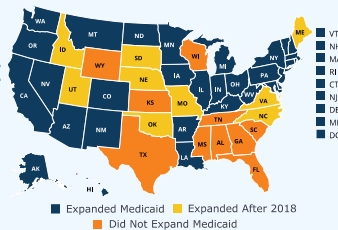
**Minors:** Molecular Medicine, Statistics, Computer Science

## Previous Research

### Impact of Affordable Care Act on Preventable Heart Disease Deaths

Mentor: Dr. Srinivas Palanki

- **Goal:** did the ACA prevent deaths?
- 2012 Supreme Court case -> states can choose to expand Medicaid or not
- Two comparison groups- expanded and did not expand
- Accounted for employment, obesity, & income
- Used differences-in-differences method
- Data from:



#### Result:

A nationwide reduction in heart disease mortality similar to expansion states would **prevent 14,613 deaths** over 10 years.

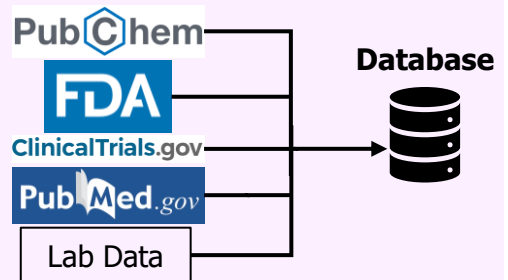


### Repurposing FDA-approved drugs for Lung Cancer

Mentor: Dr. Nancy Guo

- Repurposing or "re-positioning" already approved FDA drugs is much faster for approval
- **Goal:** create a database for medical researchers and professionals to find candidates

#### Data Sources



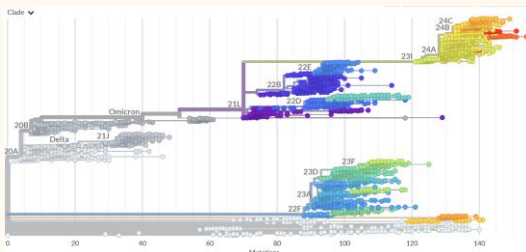
Funding: NSF Partnerships for Innovation 2234456

## Current Research

### Monitoring Viral Variants in West Virginia Patients

Mentor: Dr. Peter Stoilov

**Goal:** Track flu and COVID variants and 200+ other viruses using nasal swab DNA



Source: Nextstrain

Funding: CDC ELC Enhancing Detection Through Coronavirus Response and Relief (CRR) Supplemental Funds

### Genetic Analysis of Mice for Omega-3 Fatty Acid Sources and Western Diets

Mentor: Dr. Janet Tou

**Goal:** Find disease mechanisms based on changes from:

- 1) Western diet (high-carb, high-fat) vs standard diet
  - 2) Omega-3 sources (types of fish, flaxseed, chia seeds, soybeans)
- Analyze differences in RNA expression within different tissues

Funding: USDA NIFA#71609018