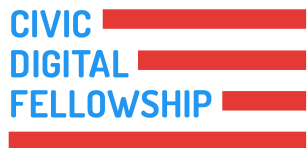


DATA PIPELINES

All of Us Research Program

Dylan Klomparens



ALYSSA ROMANOS
Stanford University '21
Computer Science

AVIVA WEINBAUM
Barnard College '22
Computer Science

All of Us Research Program

Accelerate health research and medical breakthroughs, enabling individualized prevention, treatment, and care for all of us.



All of Us Research Program

1



Participants Share Data

2



Data is Protected

3



Researchers Study Data

4



Participants Get
Information

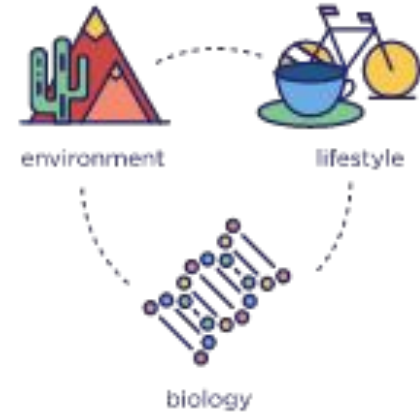
5



Researchers Share
Discoveries

Goals

- Explore Apache NiFi
- Build a Custom Processor in NiFi for FHIR (Fast Healthcare Interoperability Resources) data
- Create Data Linkages to All of Us participant data



NiFi FHIR Processor

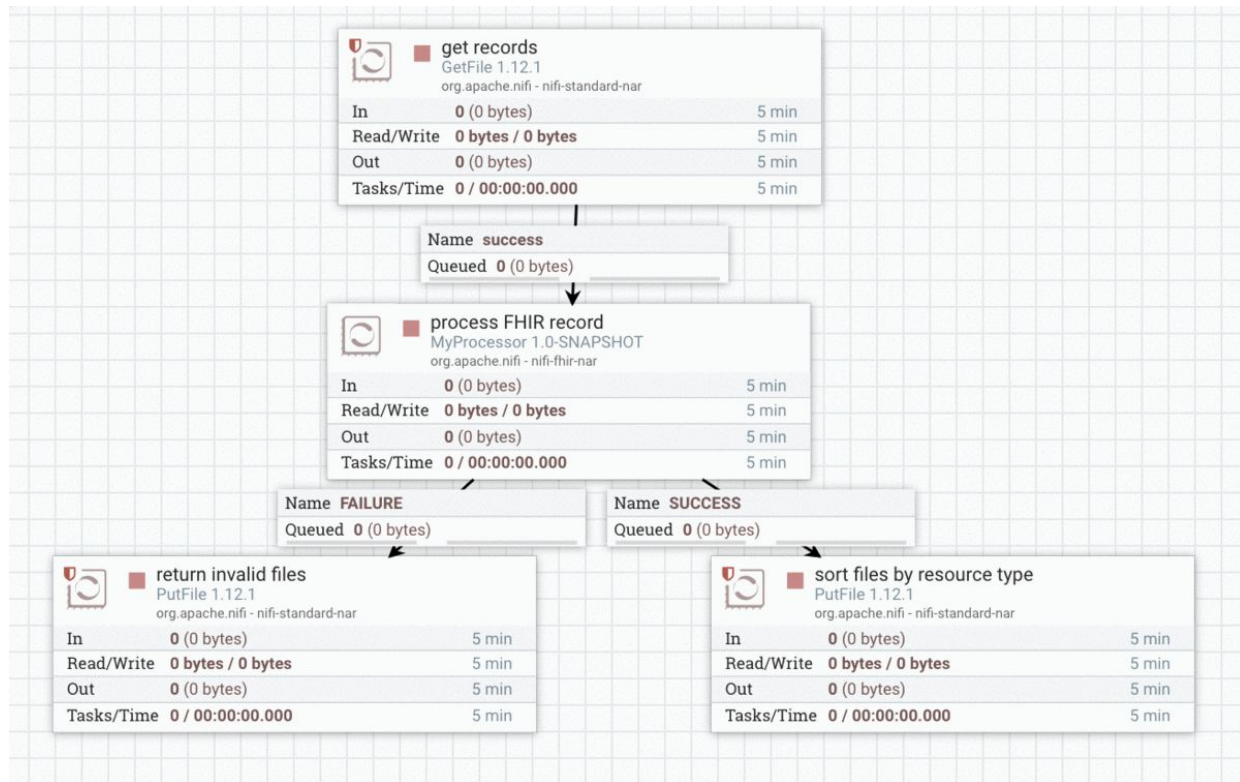


nifi



HL7[®] FHIR[®]

NiFi FHIR Processor



DATA LINKAGES



All
of Us



DATA LINKAGES

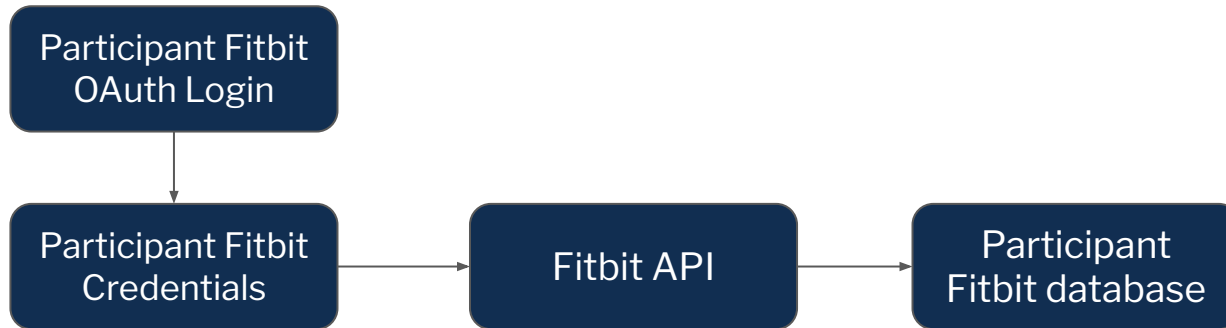
- Particulate Matter (2.5/10)
- Ozone
- SO₂
- Carbon Monoxide
- NO₂
- Lead



DATA LINKAGES



Apache Nifi Pipeline



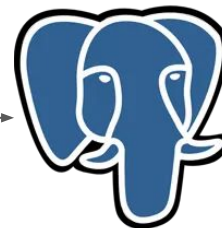
DATA LINKAGES

Census Reporter



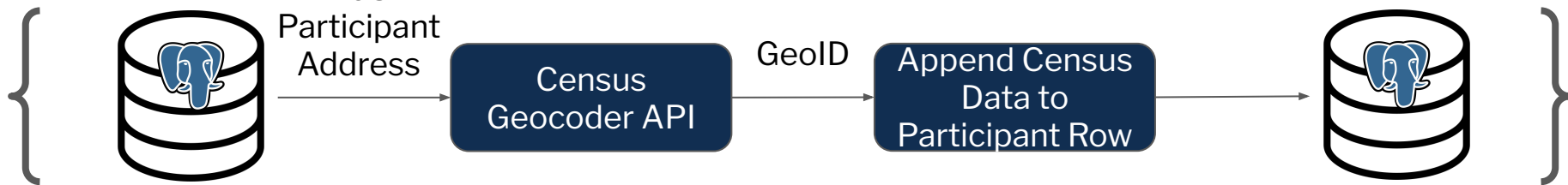
AMERICAN
COMMUNITY
SURVEY
U.S. CENSUS BUREAU

Median Household
Income & Median Home
Value by Census Tract
GeoID



PostgreSQL

Apache NiFi Pipeline



FUTURE WORK

- Add our collected data to the curated data repository
- Collect more EPA data
- Create other data linkages

THANK YOU

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- Dylan Klomparens
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- Claire Schulkey
- Tamara Litwin
- The AoU Tech Team
- The CDF Fall 2020 Cohort
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QUESTIONS?