## 🙆 Google Cloud

# Accelerate Research Initiatives at scale with Google Cloud

As an NIH STRIDES Initiative partner, your NIH-funded researchers can access Google Cloud platform to begin advancing data discoveries and research initiatives. Scalable tools such as Compute Engine virtual machines, BigQuery, and TensorFlow will enable you to perform rapid analysis and scale with ease.

### How Google Cloud powers research

### Virtual Computing

Gain on-demand elasticity and enhance your computational capacity in order to optimize your research and analysis.

- Customize virtual machines to better fit your workloads and utilize preemptible machines up to 80% cheaper than regular instances
- Burst from on-premise resources to cloud through scheduler integration
- Access thousands of cores as needed

# Diagnose disease more easily by processing data in the cloud

By storing whole genome sequences and data on patient health, environments, and lifestyles in the cloud, the University of Michigan can enable insights into the diagnosis and treatment of disease.

"With the seemingly limitless resources on compute engine, we can compress years of data prep into a few months. That means researchers can start analyzing the data and making discoveries much sooner."

### Jonathon LeFaive

Senior App Programmer/Analyst, Department of Biostatistics, University of Michigan



### Learn more

#### Genomics and Life Science Research

Use Google Cloud to tackle data interoperability challenges, and process and share large, complex datasets more securely.

- Leverage Google Cloud Healthcare API to accelerate ingestion, storage, and integration of key data types, including FHIR, HL7v2, and DICOM
- Share tools and data with your group, collaborators, or the broader research community
- Use Google Cloud <u>BigQuery</u> to quickly find meaningful insights on small as well as complex datasets

"Cloud computing allowed us to speed up discovery. We collaborated with Google Genomics to test varying implementations of the standard processing pipeline for exome sequencing data on the cohort and population scale. The cloud was really our only option for this.

Mike Nalls, PhD Scientist, National Institute on Aging





# Supporting your research needs from start to finish



"We have the flexibility to scale up to several thousand independent virtual instances in parallel, so we can generate a full analysis for a single epidemic scenario – which may consist of up to 250,000 independent simulations – in less than a day.

Matteo Chinazzi Associate Research Scientist, Northeastern University

### Why Google Cloud?



### Best-in-class security from data center to device

removing data silos.

Our cloud-based productivity tools support HIPAA compliance, so public and sensitive data can be captured and shared remotely and more securely. <u>Cloud Security Command Center</u> provides a unified view into security policy across your entire organization.

#### High performance, low costs

Our serverless data warehouse, BigQuery, automatically scales to thousands of cores in seconds, so you can cost-effectively process petabytes of data and share information faster.

### Highest quality analytics and AI/ML solutions

With BigQuery, researchers can quickly find meaningful insights in their data. Our AI Platform and TensorFlow let researchers build and train customer models on their data to detect patterns on even the largest datasets and predict key outcomes.

### Get trained on Google Cloud

Google Cloud provides NIH-funded researchers with access to various training courses and to help them effectively use our platform.

Start your team's learning path today by visiting <u>Carahsoft STRIDES</u> <u>Initiative Learning Portal</u>

### Let's start working together

NIH-funded researchers with an active grant can access Google Cloud through Carahsoft. Contact Carahsoft at <u>NIHSTRIDES@carahsoft.com</u>