



## Move from bold idea to big discovery in a fraction of the time

With Google Cloud Platform (GCP), you'll have access to the power and flexibility you need to advance your research. Scalable tools such as Compute Engine virtual machines, BigQuery and TensorFlow will enable you to perform lightning fast analysis and scale with ease.



### Ways GCP can power research in higher education

#### High Performance Computing (HPC)

Extend your campus HPC to gain on-demand elasticity and consistent performance. Expand your computational capacity in a highly available environment, enabling your campus to focus on doing its best teaching, learning and research.

##### How GCP can help HPC:

- Customize VMs to better fit your workloads and utilize preemptible machines up to 80% cheaper than regular instances
- Future-proof your environment with the latest CPUs, GPUs & TPUs
- Burst from campus resources to cloud through scheduler integration
- Access to thousands of cores whenever a researcher needs them
- Reduce queue wait-times to enable researchers to ask more questions

With GCP there's no need to maintain a separate silo of high performance computing accelerators. GCP lets you integrate GPUs and other accelerators into a broader cloud platform so you can use them wherever you need them.

#### Genomics and Life Science Research

Google solutions for Genomics help the life science community organize the world's genomic information and make it accessible and useful. Big genomic data is here today, with petabytes rapidly growing toward exabytes. With GCP you can store, process, explore, and share large, complex datasets.

##### How GCP can help genomics and life science research:

- Whether you are working with one genome or one million, scale to your needs with customizable virtual machines
- Query terabytes of data in seconds and petabytes in minutes
- Leverage Cloud Machine Learning Engine to bring intelligence to your medical imaging research
- Share your tools and data with your group, collaborators, or the broader community, if and when you choose. Google Cloud is committed to open industry standards, including those developed by the Global Alliance for Genomics and Health
- Google Cloud Platform will also support HIPAA covered customers by entering into a Business Associates Agreement

"Your whole outlook on research changes when you can ask a question and get an answer in hours rather than months."

**Andrew V. Sutherland**  
*Computational number theorist and  
Principal Research Scientist, MIT*

"GCP is accelerating academic AI research."

**Yoichi Matsuyama**  
*Post-Doctoral Fellow at the  
Language Technologies Institute,  
Carnegie Mellon University*

"The same amount of money can generate four times as much data as the year before."

**Goncalo Abecasis, D.Phil.**  
*Chair, Department of Biostatistics,  
University of Michigan*

## Popular research tools in higher education



### Cloud Dataproc

A fully-managed cloud service for running Apache Spark and Apache Hadoop clusters in a simpler, more cost-efficient way



### Cloud SQL

Store and manage data using a fully-managed, relational MySQL database



### BigQuery

A fast, economical, and fully managed data warehouse for large-scale analytics



### Cloud Dataflow

Simplified stream and batch data processing, with equal reliability and expressiveness



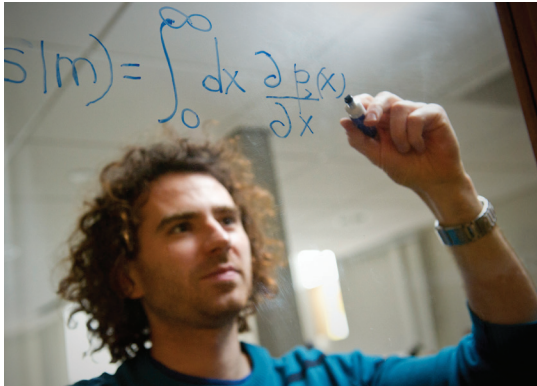
### Container Engine

Run Docker containers on Google's infrastructure, powered by Kubernetes



### Cloud Machine Learning Engine

Fast, large scale, and easy-to-use machine learning services



"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 choose Google Cloud Platform?



### Commitment to openness

Co-innovation, interoperability, and portability are integral to a future-proof architecture



### Powerful data & analytics

Tap into big data and machine learning to find answers faster, build better products and fuel amazing applications



### Innovative infrastructure

Google's global network has thousands of miles of fiber optic cable and uses advanced software-defined networking to deliver fast, consistent and scalable performance



### More security at scale

Deploy on an infrastructure protected by more than 700 top experts in information, application and network security

## Get started

### GCP research credits

With free credits for Google Cloud Platform, you will have access to the power and flexibility needed to advance your research and scale with ease. Academic researchers in qualified regions are encouraged to apply at [cloud.google.com/edu](https://cloud.google.com/edu).

### Trainings

Visit [cloud.google.com/training](https://cloud.google.com/training) for resources that can help you learn about Google Cloud Platform. Get hands-on practice at [codelabs.developers.google.com](https://codelabs.developers.google.com).

### Technical Support

Learn more about the various support packages with Google Cloud Platform at [cloud.google.com/support](https://cloud.google.com/support).

### Contact us

Email [gfe-emea-he@google.com](mailto:gfe-emea-he@google.com) or speak with our partner CTS:



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