



PacBio and Google Collaborate to Use Machine Learning to Optimize Long-Read Sequencing Data Analysis

January 11, 2022

Initial proof-of-concept work suggests strong potential to further improve PacBio's highly accurate HiFi Sequencing with Google deep learning technologies

MENLO PARK, Calif., Jan. 11, 2022 (GLOBE NEWSWIRE) -- [PacBio](#) (NASDAQ: PACB), a leading developer of high-quality, highly accurate sequencing platforms, today announced a research collaboration with Google. Under the terms of the collaboration, PacBio will explore the use of Google's genomic analysis, machine learning and algorithm development tools to further improve PacBio's already highly accurate variant calls for HiFi sequencing runs, unlocking more insights from PacBio sequencing data.

The collaboration builds on previous research from PacBio and Google. A recent publication on the work available on bioRxiv, [Deep Consensus: Gap-Aware Sequence Transformers for Sequence Correction](#), yielded improvements in variant calling and suggested that Google's [DeepConsensus](#) machine learning tool is capable of increasing the yield of 99.9 percent accurate HiFi reads by as much as another 27 percent per instrument run.

"By collaborating with Google, PacBio will ultimately help our customers further improve the quality and output of HiFi data by reducing the number of sequencing passes needed to achieve high confidence in base accuracy," said Christian Henry, President and CEO of PacBio. "These improvements in accuracy and data analysis have the potential to enable more customers to experience the benefits of long-read sequencing as part of their research and translational projects, ultimately making a positive impact on implementing genomics in precision health."

PacBio hopes to improve the utility and overall value of HiFi data specifically for applications such as whole genome sequencing (WGS), full-length isoform, and targeted sequencing applications by integrating Google's deep learning technology into its future product releases.

"Collaborating with PacBio presents the opportunity to help unlock more of the value in highly accurate genomic data, which will enable the research community to further improve their understanding of biology," said Andrew Carroll, Genomics Product Lead for Health AI at Google. "This is a strong step forward in working with the genomics community to maximize the value of genomic data."

Terms of the deal were not disclosed.

To learn more about HiFi sequencing, visit www.pacb.com/HiFi.

About PacBio

Pacific Biosciences of California, Inc. (NASDAQ: PACB) is empowering life scientists with highly accurate sequencing platforms. The company's innovative instruments are based on Single Molecule, Real-Time (SMRT[®]) Sequencing technology, which delivers a comprehensive view of genomes, transcriptomes, and epigenomes, enabling access to the full spectrum of genetic variation in any organism. Cited in thousands of peer-reviewed publications, PacBio[®] sequencing systems are in use by scientists around the world to drive discovery in human biomedical research, plant and animal sciences, and microbiology. For more information, please visit www.pacb.com and follow [@PacBio](#).

PacBio products are provided for Research Use Only. Not for use in diagnostic procedures.

Forward-Looking Statements

This press release may contain "forward-looking statements" within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, and the U.S. Private Securities Litigation Reform Act of 1995, including statements relating to future availability, release dates, uses, accuracy, advantages, quality or performance of, or benefits or expected benefits of using, PacBio products or technologies, the suitability or utility of such products or technologies for particular applications or projects, including in connection with the use of genomic analysis machine learning and algorithm development tools to explore improvements to variant calling accuracy; and other future events. You should not place undue reliance on forward-looking statements because they involve known and unknown risks, uncertainties, changes in circumstances and other factors that are, in some cases, beyond PacBio's control and could cause actual results to differ materially from the information expressed or implied by forward-looking statements made in this press release. Factors that could materially affect actual results can be found in PacBio's most recent filings with the Securities and Exchange Commission, including PacBio's most recent reports on Forms 8-K, 10-K, and 10-Q, and include those listed under the caption "Risk Factors." PacBio undertakes no obligation to revise or update information in this press release to reflect events or circumstances in the future, even if new information becomes available.

Contacts

Investors:

Todd Friedman

ir@pacificbiosciences.com

Media:

Kathy Lynch

pr@pacificbiosciences.com

