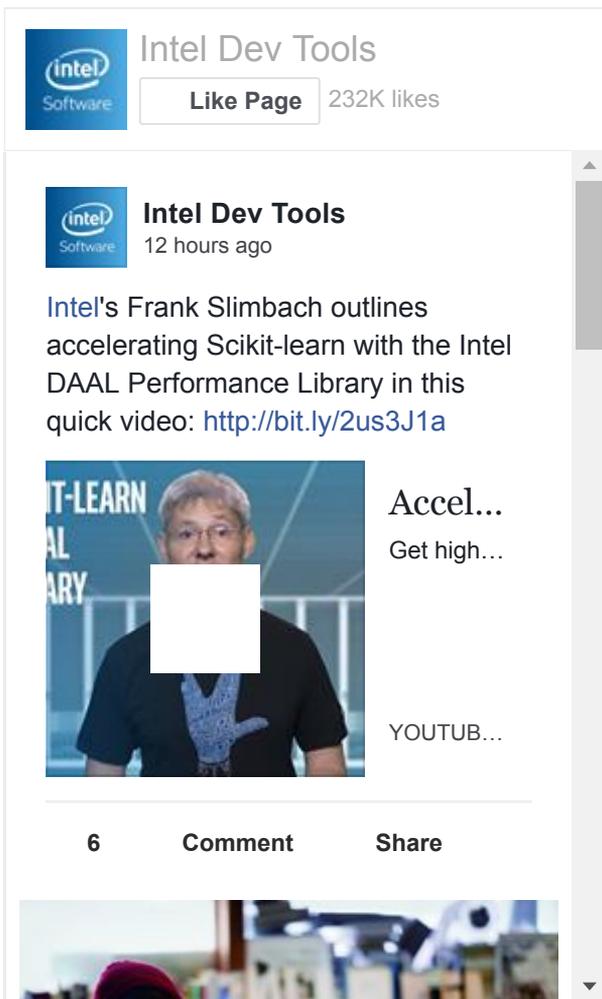


Crunch more data, build code faster with top compilers and libraries, and take advantage of the incredibly wide vector registers on today's and tomorrow's Intel® processors.

SPONSORED

Developer Skills at Work: Serious (and Not-So-Serious) Stuff



Intel Dev Tools
Like Page 232K likes

Intel Dev Tools
12 hours ago

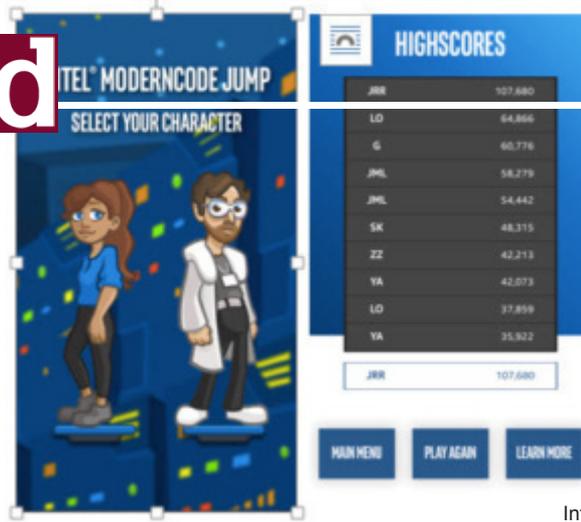
Intel's Frank Slimbach outlines accelerating Scikit-learn with the Intel DAAL Performance Library in this quick video: <http://bit.ly/2us3J1a>

Accel...
Get high...
YOUTUB...

6 Comment Share

Feeling knowledgeable? I have two different opportunities to put your software development knowledge to work. They could *not* be more different!

Not-so-serious first. In preparing for this blog, I wasted enough time to become the leader on this [interactive game](#) (my initials: "JRR"). Some of the questions are based on a trivia contest we held at the Supercomputing conference a few years ago. The booth trivia contest was a hit with our audience. Now we can all participate and show off our knowledge in a simple video game. Can you displace me?



Intel

Five Students, nine weeks, and our votes help determine the winner

On the more serious note, my friends at [CERN openlab](#) have five brilliant students working on applications as part of their [Summer Student Programme](#). In conjunction with Intel, they'll be giving us an opportunity to review their progress, comment on it, question it, and vote on our favorites. I'll share what I know now – and you can visit [this link](#) for updates.



The five challenges are:

1. ***Smash-simulation–fifth generation GEANT*** This project aims to develop faster algorithms for simulating particle-collision events as part of creating a fifth generation of the popular GEANT (GEometry ANd Tracking) software. Physicists widely use a software toolkit called [GEANT4](#). An international team, led by researchers at [CERN](#), is

How working to develop a new version of this simulation toolkit, called [GeantV](#). This is an openlab project with Intel on code modernization. Register for [GeantV](#) aims to improve physics accuracy and boost performance.

2. **Connecting the dots – can machine learning help?** [Particle detectors](#), such as those used at CERN, are designed to recognize different types of charged particles produced by the collisions at the heart of the detector. As the charged particles fly outwards through the various layers of the detector, they leave traces (or 'hits'). This project aims to combine the use of machine-learning techniques to help recognize these hit shapes more efficiently.
3. **Cells in the cloud** This project aims to adapt the [BioDynaMo](#) for running high-performance computing resources over the cloud. It focuses on adding network support for the single-node simulator and prototyping the computation management across many nodes.
4. **Disaster relief** Helping computers "see" objects in UN satellite maps: This project is exploring new approaches to image analysis and automated feature recognition to ease the task of identifying different classes of objects from satellite maps. It will evaluate available machine-learning-based feature-extraction algorithms.
5. **IoT at the LHC** small computing for the largest science project in the world?: [The Large Hadron Collider \(LHC\)](#) accelerates particles to over 99.9999% of the speed of light. It is the most complex machine ever built, relying on a wide range of industrial control systems for proper functioning. This project will focus on integrating modern "systems-on-a-chip" devices into the LHC control systems so they will be able to communicate via an overlaying cloud-computing service. A goal is to reduce the network load within the entire control infrastructure and ensure that applications are not disrupted by limited or intermittent network connectivity.

I will [post updates as the summer continues](#) – and we'll all be able to review and vote on our favorites. One of the five students will be selected to showcase the winning project. The winner will be announced at the upcoming [Intel HPC Developers Conference](#) on November 11, and will be demonstrated in the days following that at the [Supercomputing 2017](#) conference in Denver.

Additional reading to learn more:

- [Announcement and where I will post updates on how to vote when available](#)
- Intel's more [detailed explanation of the individual projects involved](#)
- CERN openlab's site about their [Summer Student Programme](#)
- Intel Modern Code Jump – goofy little “time waster” skills and knowledge-based game

[Click here to play!](#)

Click [here](#) to download your free 30-day trial of Intel Parallel Studio XE

YOU MIGHT LIKE
