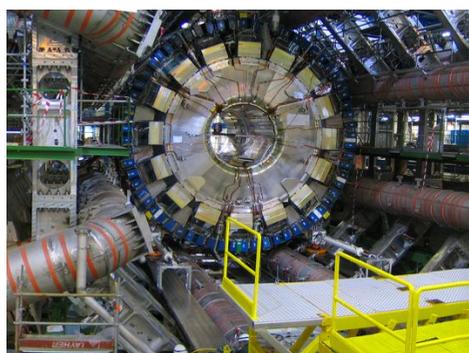


# Student programmer wins CERN openlab

Marc Saltzman, Special for USA TODAY 9:16 a.m. EST November 16, 2015



(Photo: CERN)

If you were tasked with choosing the ultimate grand prize for a

A million dollars? Nah. Lunch with PC pioneer Bill Gates? Ho-hum.

Instead, it would likely be an internship at CERN openlab, one of the top research centers on the planet.

Based in Geneva, CERN houses the world's largest particle physics facility, the Hadron Collider (LHC), plus it's the birthplace of the World Wide Web.

CERN is a research facility that encourages experimentation and collaboration to solve data-intensive challenges.

Mathieu Gravey, a 25 year-old university student in France, has won this coveted grand prize from the Intel Modern Code Developer Challenge in partnership with CERN openlab.

"This is very, very exciting," says Gravey, in a Skype video interview with USA TODAY. "It's the opportunity to work at one of the most famous international research centers."

"I hope to meet interesting scientists, while acquiring and developing new skills under them," adds Gravey. "Artificial intelligence and edge technologies are key fields of study for years to come."

## The challenge

Available only to students, this international coding contest challenged students to optimize code used to simulate the development of a normal and diseased brain, in order to help researchers understand neurodevelopmental brain disorders, such as epilepsy, autism, and schizophrenia.

In particular, the software focuses on simulating the development of a normal and diseased brain, in order to help researchers understand neurodevelopmental brain disorders, such as epilepsy, autism, and schizophrenia.

This code is part of an existing CERN openlab research project, in collaboration with Newcastle University's "Openlab for High Performance Computing" framework to help accelerate research among multiple scientists.

Students who entered the Intel Modern Code Developer Challenge were tasked with optimizing the code used by CERN researchers to make life-changing scientific breakthroughs faster.

Out of the roughly 2,000 students, representing 130-odd universities across 19 countries, Gravey submitted the winning code and won an internship at CERN openlab in 2016.

"Brain simulation is very interesting and it might be the future of informatics," says Gravey. "Nowadays, the link between computer and biology is also getting stronger."

Gravey maintains his biggest challenge was “diving into code that you haven’t written, plus this kind of all optimizations were performed through an iterative process.”

Perhaps he’s just being modest: according to Intel, Gravey improved the performance of the code by a w