Published on *CERN openlab* (http://openlab-archive-phases-iv-v.web.cern.ch)

Summer Student Programme [1]

CERN is the birthplace of the World Wide Web and where the Higgs particle was discovered by two of the major LHC experiments, the ATLAS and CMS collaborations. The laboratory hosts ground-breaking experiments and is at the heart of the Worldwide LHC Computing Grid (WLCG). This is a place like no other where dizzying IT challenges abound!

Located just outside Geneva, straddling the border between Switzerland and France, CERN explores what matter is made of and what holds it together by accelerating particles to a fraction under the speed of light and then smashing them together. CERN is home to the Large Hadron Collider (LHC), a 27 km circumference accelerator buried 50-175 m below ground. Particles collide in the LHC experiments' detectors approximately 1 billion times per second, generating about one petabyte of collision data per second.

CERN openlab is a unique public-private partnership, first established in 2001, that accelerates the development of cutting-edge solutions for the worldwide LHC community and wider scientific research. Through CERN openlab, CERN collaborates with leading ICT companies and research institutes.

CERN openlab's current three-year phase tackles ambitious challenges covering the most critical needs of IT infrastructures in domains such as:

? Data Acquisition

? Computing Platforms

? Data Storage Architectures

? Compute Provisioning and Management

? Networks and Communication

? Data Analytics

By joining the CERN openlab Summer Student Programme, you will work with some of the latest hardware and software technologies and see how advanced IT solutions are used in

high energy physics. You will have the opportunity to attend a series of <u>lectures</u> [2] developed for the CERN openlab Summer Students, given by IT experts on advanced CERN-related topics. Included in the programme are also <u>visits</u> [3] at the CERN facilities and experiments as well as other research laboratories and companies.

The CERN openlab Summer Student Programme is much more than just a summer at CERN. It can lead to follow-on projects in your home institute. It may even inspire you to become an entrepreneur in cutting-edge computing technologies!

Who should apply?

Are you a B.Sc. or M.Sc. student (who will have completed at least three years of full-time studies at university level by next spring) in computer science, mathematics, engineering, or physics ? with a strong computing profile? Would you be interested in working on an advanced IT project for two full months (nine weeks) during the period June-September 2018? If so, you should apply to the CERN openlab Summer Student Programme!

How to apply?

The application must be submitted to <u>www.cern.ch/jobs/join-us/cern-openlab-student-programme</u> [4] by 19 February 2018 with the following documents attached to it: the applicant?s CV, recommendation letter(s) by university supervisor(s), a motivation letter with an indication of the preferred area of work, and the university declaration for the current year. Incomplete applications will not be considered. Replies to applicants will be sent out by the end of April 2018.

Stipend

A stipend of 90 CHF per day during contractual dates (generally 61 days) is sponsored by CERN and the CERN openlab industrial members and should cover accommodation and living costs during the nine-week stay. Students are covered by the CERN health and accident insurance scheme, and are offered a travel allowance on a lump sum basis.

Students' projects

Several projects and groups at CERN will host CERN openlab Summer Students. Examples of projects that students undertook in the past years include:

? Porting a Java-based Brain Simulation Software to C++

? Performance study of detector alignment software

? Evaluating the performance of Seagate Kinetic technology and its integration with EOS

? Upgrading the Huawei Cloud Storage Benchmark to make it compatible with ROOT6

? Archiving OpenStack cloud volumes

? Processing of the WLCG job monitoring data using ElasticSearch

A report on the work carried out is to be handed in at the end of the stay. The CERN openlab Summer Students are also given the opportunity to present their work at dedicated lightning talks? events.

[5]
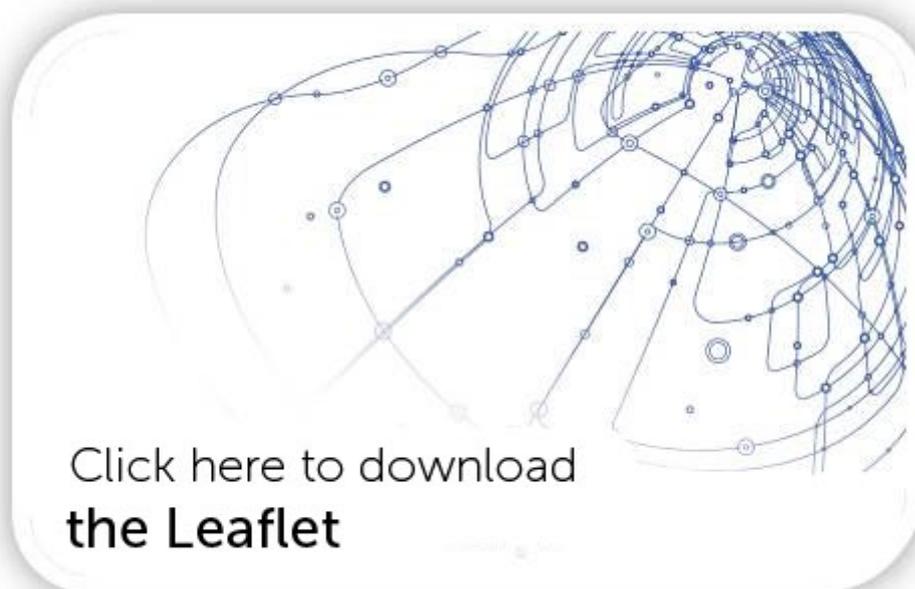
[6]

- Visit Us
- RSS Feeds

DISCLAIMER: This Web page contains pointers to material related to the management of CERN openlab in the Information Technology Department at the European Organization for Nuclear Research (CERN). Their use and distribution are regulated by the CERN copyright notice.