2017 Illumina Bioinformatics/Data Science Internship

A paid internship with the leaders in Next Generation DNA sequencing (NGS)
Cambridge, UK. Full Time/12 weeks

If you are seeking a company that is unlocking the power of the genome and improving human health – join Illumina in our iAspire Internship Program. We'll offer you rewarding, challenging work and a chance to make a difference.

Our focus on innovation has established us as the global leader in DNA sequencing and array-based technologies, serving customers in the research, clinical and applied markets. Our products are used for applications in the life sciences, oncology, reproductive health, agriculture and other emerging segments. Each summer, over 75 undergrad, Masters and PhD students embrace our internship roles. The positions span all skill sets, from the highly technical to corporate functions: Finance, Bioinformatics, Engineering, Research & Development, Marketing, and Software, among others. Our 12-week program, iAspire, focuses on relevant project work, professional and personal development, in addition to networking opportunities.

When you join the high-performing team at Illumina, your work takes on new meaning—to an exponential degree. Our growth, our positive culture, and the impact our products are having in the world ignite a passion that drives our people forward. And together, we accomplish beyond expectations. Interested parties need to apply via our careers website and use the respective reference number. Please include a cover letter clearly outlining why you are interested in this particular internship project.

Important: Applicants will need to apply via our careers website and use the reference "6887BR". Please include a cover letter that clearly outlines your interest in the project and why. Application end date 4th March 2017

http://www.illumina.com/company/careers/search-jobs.html

Intern Title: Biochemistry Development of SBS Technology
Supervisor: Pietro Gatti

At Illumina, we push the limits of technology to transform human health and drive scientific innovation. The internship will be based in the Advanced Platform and Technology Development (APTD) department at Illumina's Chesterford Research Park site. Within the Sequencing Biochemistry team, part of APTD, we combine molecular biology, biochemistry, chemistry and system integration to deliver improvements in Illumina's core SBS technology [1-2]. We use a mix of standard and bespoke biochemical tools to understand and improve enzyme/substrate interactions, and then assess their performance in DNA sequencing. Continuous changes in the chemical, fluidic and optical components of our instruments, as well as Illumina's commitment to deliver ever-improving data quality, require the fine-tuning of each biochemical step enabling DNA sequencing [3].

In this context, we are looking for a candidate to design and perform a range of biochemical experiments that will inform SBS development. The ideal candidate will have a BSc (Biochemistry, Chemistry, Biotechnology preferred), although strong applicants studying towards a degree will also be considered. We are looking for candidates with a keen interest for the understanding of the molecular

mechanisms underlying biological and biochemical processes. Knowledge of enzyme kinetics, and practical experience in performing enzyme assays are required, while previous experience with next generation sequencing is not a prerequisite for this position. Basic understanding of programming, and proficiency in the use of data analysis software (Origin, GraphPad, JMP, etc) would be an advantage. A high level of accuracy and attention to detail is important alongside excellent written and oral communication skills and a strong team spirit.

Further reading:

[1] Understanding the genetic code - http://www.illumina.com/techniques/sequencing/dna-sequencing.html
[2] Accurate whole human genome sequencing using reversible terminator chemistry - http://www.nature.com/nature/journal/v456/n7218/full/nature07517.html
[3] DNA polymerases drive DNA sequencing-by-synthesis technologies: both past and present - http://journal.frontiersin.org/article/10.3389/fmicb.2014.00305/full

All About Us

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lllumina has experienced phenomenal growth from $10 million in revenues in 2002 to approximately $2.2 billion in 2015. Forbes named Illumina #1 on the 2009 list of 25 Fastest-Growing Technology Companies in the United States, the second time over a three year period that Forbes ranked Illumina #1 on its list of rapidly growing technology companies. Illumina was also named #1 smartest company in the world as part of MIT's 2014 Technology Review. As of February 2016, the company had a $21 billion market capitalization.