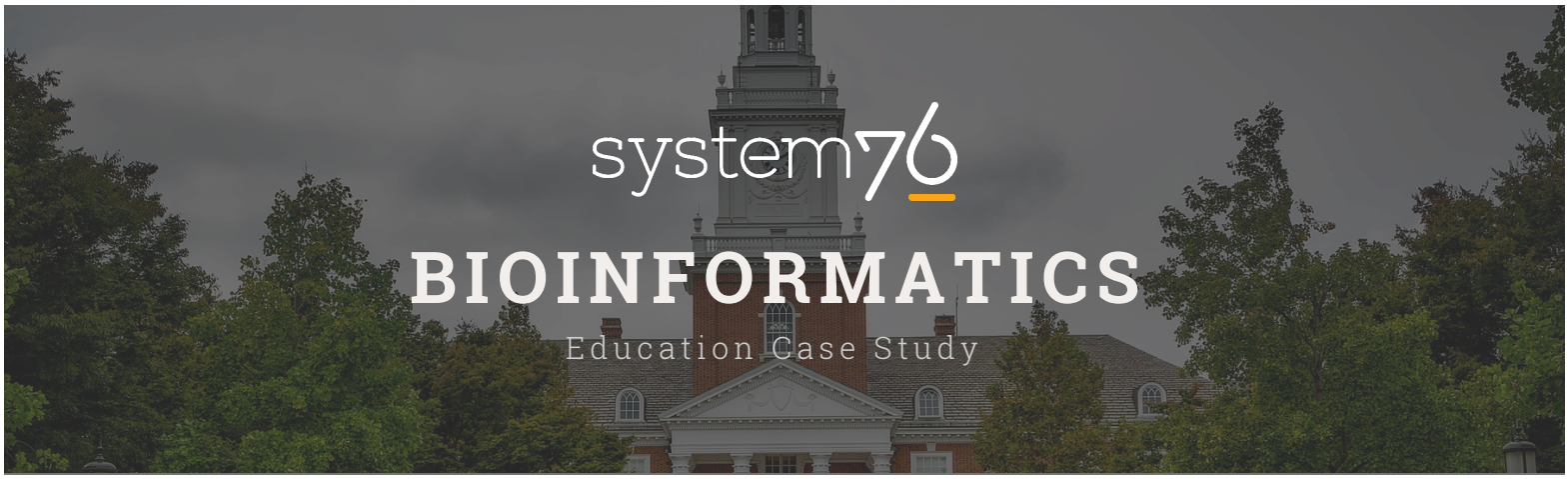

BIOINFORMATICS

Education Case Study

Joshua Orvis, a Professor of Bioinformatics at Johns Hopkins University was searching for a Linux computer to help teach his courses. First, these courses require powerful computers to keep up:

"In our field (bioinformatics), a developer's primary machine needs to have good CPU and RAM resources to deal with large datasets. Many bioinformatics tools are written to use multiple cores and some, such as transcriptomic assemblers, can use 50+ GB of RAM...

Similarly, disk space is also important, as individual files can be more than 1 TB in size. The ideal layout is having the OS and supporting files on a fast solid-state disk, then also have a second larger (but slower) spinning disk for mass storage."

Hardware is just part of the equation. Scientific data analysis and bioinformatics are generally done on Linux and the first two weeks of introductory courses often involve getting Linux on students' computers.

Professor Orvis was looking for a solution that was affordable and had Linux ready out-of-the-box. Additionally, the laptop needed to have a wide screen, as many students collaborate while using a single laptop.

Fitting analysis images, terminals, data files, code windows (and a combination of these) means a wide window space is also ideal.

They decided on the Kudu laptop. The Kudu has a large 17" display and delivers reliability because it's supported by a committed Linux manufacturer.

"What attracted me to System76 was the native Linux support. The first week of my courses guides students through the many possible ways of setting up a working computational environment in Linux, often in place of Windows, and that goes away completely if Linux is natively supported."

By using a System76 machine, Professor Orvis could jump straight into teaching how to use Linux and command line utilities without spending days debugging each student's issues installing Linux onto their machines from other manufacturers.

Having machines with dedicated and supported Linux installs, students get a more immersive learning experience compared to their previous experience switching back and forth between Windows and a virtual machine (VM). Most find that they get used to, and prefer, the command line speed and utility.

" I was quite happy with the speed and performance of the [System76 laptop] I used, as I set up our geonomic annotation system on it and tested generating the annotation of 10 genomes in less than two hours."

After adopting System76 for teaching his bioinformatics and data science courses, Professor Orvis concludes:

"System76 laptops and desktops are high-performing, affordable machines for students entering bioinformatics and data science fields. I would love to make them required for all my classes."

Scientists and educators rely on System76 to get their work done. Contact an expert today to learn how System76 hardware and software can unleash your potential: https://system76.com/contact/