



Illumina staff global technical training and development specialist Sireesha Lujan at the San Diego headquarters. Photo by Kristy Walker

It's all about accessibility: Developing technical training for the MiSeq i100

Think you know the ins and outs of an instrument? Illumina's Sireesha Lujan studies every step—so you don't have to

Illumina recently launched the MiSeq i100 and MiSeq i100 Plus Systems,¹ two powerful, compact benchtop sequencers that incorporate more than 140 invention disclosures and 60 patent families. On our News Center, we are celebrating outstanding employees who helped develop this breakthrough technology.

SIREESHA LUJAN'S FASCINATION with genetics began during her undergraduate studies at the University of California, San Diego—just a short drive from Illumina's headquarters. She enrolled in a course on the genetics of disease, where she learned about Illumina sequencers. It was January 2011, and the original MiSeq had just been released. Inspired by the potential of Illumina's technology, she decided she wanted to work for the company. "I thought what they were doing was going to change the world," she says.

Lujan started her career at Illumina in the Reagent Quality Control department, where she tested all reagents for every step, from library prep to sequencing.

This role gave her a deep understanding of Illumina's technology and products. She later transitioned to the Method Validation and Transfer team, where she trained others on new products and QC processes—which eventually led to her current role in Global Technical Training.

As a staff global technical training and development specialist, Lujan is part of a team that creates training material for customers and Illumina support staff. To do this, they must become experts on the products. "We got our hands on the MiSeq i100 early and tested it out," she recalls; they provided feedback to the software development team² as it was working on the system, highlighting features that might be tricky or would be useful to add.

When the product is closer to launch, Lujan's team works on the training material while the technical writers draft and revise the product documentation, or user guide. "We follow the product documentation as a customer would and then give feedback to the writers," Lujan says. "If we found something confusing, maybe

1. [illumina.com/systems/sequencing-platforms/miseq-i100.html](https://www.illumina.com/systems/sequencing-platforms/miseq-i100.html)

2. [illumina.com/company/news-center/feature-articles/inside-miseqi100-making-the-software.html](https://www.illumina.com/company/news-center/feature-articles/inside-miseqi100-making-the-software.html)

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a customer would, too. At various times, the technical writers come to our lab and follow us while we're loading a run, or while the engineers are doing their teardown and rebuild."

Lujan's experienced team members come from tech support or field roles; a few of them are even former Illumina customers. "We have very deep technical knowledge of Illumina's previous platforms and are highly attuned to our customers' needs and product usage," Lujan explains. "That helps us tailor our training and support, ensuring their success." The team also includes experience designers who specialize in adult learning. Given that Illumina's customers span the globe, the team focuses on accessibility and clear wording to simplify complex sequencing concepts.

In the course of her work, Lujan was able to enjoy a unique experience—acting as the talent in a MiSeq i100 Series training video. "It was fun being the face of Illumina when usually I'm working behind the scenes to support our internal teams and customers," she says.

[Watch the video at youtube.com/watch?v=t096wwwLHqY](https://www.youtube.com/watch?v=t096wwwLHqY)

Genomics for all

The training material for the MiSeq i100 Series received particular attention because the instrument is customer installable. "We want this instrument to be accessible to all labs worldwide, especially in emerging markets where customers might be new to next-generation sequencing," Lujan says. "We wanted anyone to be able to turn it on and start sequencing right away. That's what we mean when we say, 'Genomics for all.' Everyone should have access."

To achieve this level of accessibility and have everything customers would need ready simultaneously at launch, the team created training material while the product was still in development. As the project lead for training, Lujan says that communication and cross-functional collaboration was critical for aligning her team's deliverables with development milestones. Two key deliverables were the application scientist and engineering training for internal teams. Lujan's team had to complete this material prior to launch so it could, in

turn, help prepare regional trainers across the globe. This required them to carefully coordinate and manage a nonstop, four-week schedule in which more than 20 regional trainers were certified. The regional work is ongoing, with over 350 people trained to support customers to date.

For MiSeq i100 customers, Lujan's team developed 12 self-serve web-based training modules, available in 12 languages. These modules include videos about the instrument and about its top applications, covering end-to-end workflows from library preparation to analysis.

"The MiSeq i100 Series is remarkable," Lujan says. "We're taking this benchtop sequencer³ everywhere, enabling groundbreaking research and advancing precision medicine. This is why we work at Illumina—to further the mission of unlocking the power of the genome to improve human health and ensure genomics for all."

Inspiring the next generation

Aside from her work with instruments and training, Lujan is involved in an Illumina employee resource group called SHADES, which focuses on diversity, equity, and inclusion across the company. They plan and host cultural events, such as Lunar New Year festivities and an upcoming event for Asian American and Pacific Islander Heritage Month.

For about a year, she has been a cochair of Illumina Cares, working with the Corporate Social Responsibility team to coordinate volunteer opportunities for SHADES members. Lujan especially enjoys the outreach volunteer work with high school and college students. As part of various programs, local students visit Illumina's San Diego headquarters, where they learn about STEM careers and meet professionals. "I wish I'd had this opportunity in high school," Lujan says. "I always thought since I was interested in biology, I would have to become a doctor if I didn't want to go into academics." Fortunately, she found her way at Illumina—and will continue to inspire others on their journey. ♦

To find the MiSeq i100 Series training, go to support. illumina.com/sequencing/sequencing_instruments/miseq-i100-plus/training.html

3. illumina.com/systems/sequencing-platforms/benchtop-sequencers.html

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