

Women in Data Science – Perspectives in Industry and Academia



**Bioinformatics Scientist,
Bayer Science Fellow at
Bayer Pharmaceuticals,
Berlin, Germany**

Katya Nevedomskaya – in industry, I enjoy working on early- and late-stage projects, I get to see the variety

Dr. Ekaterina (Katya) Nevedomskaya is a Bayer Science Fellow in her 6th year at Bayer AG in Berlin and has been in the scientific field for over 15 years now. Being one of the first students to study bioinformatics in Moscow in 2002, she moved to the Netherlands to pursue her PhD focusing on metabolomics data analysis. During her stay at the Imperial College in London, United Kingdom, as a visiting scientist in 2012, she became familiar with Next-Generation-Sequencing (NGS) data and later switched gears from metabolomics to genomics data analysis during her PostDoc at The Netherlands Cancer Institute, Amsterdam, The Netherlands. Working on functional genomics in cancer bridged her entrance to Bayer AG.

“I really enjoy working on early- and late-stage projects, I get to see the variety.”

In 2017, after six years of being a PostDoc researcher, she left the academic field and joined Bayer AG. At Bayer Pharmaceuticals, Katya is working on early- and late-stage oncology drug discovery projects across the pharmaceutical pipeline. Working on early projects focuses on identifying new targets, e.g. proteins or pathways, worth further analysis. The project work includes literature research, using public data combined with genomic screening, as well as backing up literature with the data. Although she enjoys working on early-stage projects, Katya especially values late-stage projects as they are more patient-related. During her work, she always has in mind the value of the given data to the overall project and likes to work in a stage of the pipeline “close to the patients”.

“In industry, you need to let go of projects, and that is something I had to learn.”

In comparison, she estimates the level of multitasking as higher in the industry than in academia. Her PostDoc positions gained her experience in the field, which she needed to improve after starting in the industry. In addition, industrial projects are more likely to be cut off or stopped at different stages, which is not as common in academia. She advises not to be too emotionally attached to ones projects.

“I myself, but also some female colleagues I see, use language in a very apologetic way, even if we name facts we don't necessarily have to apologize for or we soften the message...”

As a woman working in the field of data science, she has experienced some things, but she does not necessarily see them as obstacles. Feeling not “good enough”, being unnecessarily critical of her work, and having close to no female role models in her career, were constant companions throughout her scientific career. All of her supervisors throughout her academic and industrial career were male. But change is to come. Now she sees a new generation of scientists, in which females are more represented. Still, **“feeling not good enough is quite common for females, unfortunately”**, she states.

"I wish I would have had more mentors, who would have invested in me beyond scientific education. [...] Especially in academia that is sometimes missing."

Being asked about the importance of a mentor, Katya answers positively. Her mentors throughout her career were always insightful and valuable, a fact she appreciates. Mentors can guide you in seeing the overall picture and improving communication in your work environment. Mentors should go beyond supporting you to become a better researcher but also tackle the fields beyond pure scientific training. She considers her current boss as a good mentor.

"I am very proud that I manage to combine motherhood and career. It is not perfect on a daily basis, but for this kind of achievement, I feel especially good about that."

As a mom of two kids, Katya received Bayer's prize "Distinguished Women in Data Science Award" in 2021 while being on maternity leave with her youngest child. The award reflects efforts in internal programs but also in outreach promoting data science at Bayer and beyond. It increases the visibility of women and the work done by women inside and outside Bayer AG. Katya is grateful for being recognized for her performance within the company and proudly says **that she managed to combine both – motherhood and her career.**



"It is a beautiful career path."

As a female role model she recognizes Aviv Regev and regards her achievements as outstanding. Katya attended a couple of her talks and watched her presentations on video platforms without knowing her personally. Not only is Aviv Regev's career quite "amazing" being now at Genentech as lead of research and early development, after holding a professorship at MIT and Broad Institute. Her way of communicating science, her style of communication, and especially her greater vision on understanding biology and

personalized medicine as well as having a brilliant way to address Health Care, are also remarkable.

What was your most recent google search?

Katya didn't have to think long and said she was looking for a gene sequence in the NCBI database.

*Authors: Irena Maus & Nils-Christian Lübke, ELIXIR Germany Administration Office, October 2022.
We would like to thank Katya for this very interesting interview and wish her continued success in her career.*

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