

Dear Professor Lee,

Hello, I'm Kyungrin Noh, a graduate of Professor Doheon Lee's Bio-Information System Laboratory, KAIST. I have studied in Professor Doheon Lee's lab from 2015 to 2017, but I guess I didn't get the chance to properly introduce myself to you in person.

I'm sending you this letter in the hope to find my path as a Ph.D. student at your laboratory. After graduating master's from Professor Doheon Lee's lab, I've joined IBM, Korea as a data scientist to find real data use-cases and required skills in business fields. And now I want to continue my career path back in bioinformatics.

To my knowledge, your laboratory was the best place that I could find. I remember having experiments on *E. coli* with retrotransposon, altering the gene expression via the introduction of new sequences. Knowing that the large fractions of mammalian genomes are composed of repetitive transposable elements, I'm more than interested to handle such large datasets, apply ML/DL methodologies, and validate the results with the wet lab capability. Also, my research interests further extend to how to properly set up and manage analytics platforms for large NGS datasets, strengthening my knowledge in distributed server management and cloud architectures.

During my bachelor's, I've gained a strong knowledge of Genetics; I have conducted in vivo experiments on mouse/*Drosophila* and graduated with the thesis paper on targeted anti-tumor drug delivery. During the master's, my main research area was to find drug candidates from natural products: utilizing a plethora of natural chemical databases, human metabolic pathways, DNA/RNA/AA sequence analysis, and machine learning models.

My strong biological background from the university and the latest computational methodologies that I have learned at IBM will help me quickly catch up in the NGS research areas. And my project-based work experience will be a great plus for both your lab's project management and my research performance.

Unfortunately, most of my code works cannot be shared, for they were developed under the contract with the clients. But I'm including a link to my resume for more information about who I am and what I have experienced so far.

- Resume: https://nohfly.github.io/resume/Resume_KyungrinNoh.pdf

Thanks for your time reading my rather blunt inquiry. And, really, any comment from you will be a great help for my career planning, looking for my next career steps abroad.

Sincerely,
Kyungrin