The Koo Laboratory at the Simons Center for Quantitative Biology at Cold Spring Harbor Laboratory has two postdoc positions available (see descriptions below). Interested candidates should send a cover letter with a brief statement of research interests, CV, and contact information for three references to koo@cshl.edu.

The **Koo Laboratory** studies the functional impact of genomic mutations through a computational lens using data-driven artificial intelligence (AI) solutions. We are broadly interested in applications for studying gene regulation and protein (dys)function. Our approach develops methods to interpret high-performing AI models to distill knowledge that they learn from big, noisy biological sequence data. Our goal is to elucidate biological mechanisms that underlie sequence-function relationships, with a broader aim of advancing precision medicine for complex diseases, including cancer. For more information, check out https://koo-lab.github.io/.

Machine learning postdoc

Job description: The successful candidate will develop deep learning solutions to address cutting edge problems in regulatory genomics. Candidates with prior knowledge of computational biology or a machine learning background with a strong interest in transitioning into biological data space are encouraged to apply.

Qualifications: A PhD in Computer Science, Physics, (Applied) Math, Statistics, Bioinformatics, Engineering or other quantitative field is required. Machine learning experience is required, as is enthusiasm for biology or biomedicine. In-depth knowledge of one or more of the following is required: transformer networks, variational autoencoders, adversarial attacks/training, generative adversarial networks, and interpretability techniques for black-box models. Ideal candidates will be driven, have strong communication skills and a desire to work in an interdisciplinary environment. Prior experience with biological sequence data is a plus, but not necessary.

Computational biology postdoc

Job description: The successful candidate will apply deep learning methods to address challenging biological problems that fall within the lab's broad interests in gene expression, alternative splicing, or RNA-protein interactions. Candidates with a strong biology background and experience solving biological problems with computational methods are encouraged to apply. Prior experience with machine learning is a plus, but not necessary.

Qualifications: A PhD in Biology, Bioinformatics, Biophysics or other related field is required. The ideal candidate will be driven, have strong communication skills and a desire to work in an interdisciplinary environment. Experience with python programming is required.

Cold Spring Harbor Laboratory is a world-renowned research and educational institution recognized internationally for its excellence in fundamental areas, such as cancer, neuroscience, plant biology, genomics, and quantitative biology. Cold Spring Harbor Laboratory offers a highly collaborative social and scientific environment as well as a competitive salary and benefits. The laboratory is located on the north shore of Long Island and is readily accessible from New York City via the Long Island Rail Road.

CSHL is an EO/AA Employer. All qualified applicants will receive consideration for employment and will not be discriminated against on the basis of race, color, religion, sex, sexual orientation, gender identity, national origin, age, disability or protected veteran status.