

FOUNDING ML ENGINEER

Founding ML Engineer - Suppressor tRNA Sequence Design

Transloka Bio Pvt Ltd - KritRNA platform
Building AI-guided RNA therapeutics for nonsense-mutation diseases.

The one-line version

You will be the first machine-learning hire on Engine 01 - the system that designs engineered suppressor tRNAs - owning the modelling stack end to end, from raw biological sequence to candidates selected for wet-lab validation.

We do not filter on degrees. We care about what you can build and whether you can show it.

The problem you will own

A nonsense mutation can create a premature termination codon in the middle of a gene. The ribosome stops early and produces a truncated protein. An engineered suppressor tRNA is designed to decode that premature stop and insert an amino acid so translation can continue.

Given a candidate tRNA sequence and a specific premature-stop context, how efficiently will it restore full-length protein without misreading normal stop codons or destabilising the tRNA?

What you will actually do

- Predict readthrough efficiency for candidate suppressor tRNAs in defined sequence contexts.
- Convert RNA structure, thermodynamic stability, tRNA identity elements and codon context into learnable features.
- Develop constrained generative methods that propose novel tRNA sequences and rank competing objectives.
- Run the active-learning loop: select candidates for costly wet-lab validation and use the results to improve the models.
- Build reproducible training pipelines, experiment tracking, model and data versioning, and honest evaluation.

What we need you to be genuinely good at

- Fluent Python and a modern deep-learning framework; PyTorch is preferred, while JAX or TensorFlow are acceptable.
- Classical and deep machine learning, including sound judgement about small, noisy biological datasets.
- Sequence or structured-data modelling using CNNs, attention or transformers, RNNs or related approaches.
- End-to-end delivery: data in, trained model, honest evaluation, and a result that another person can rerun.
- Cross-validation, leakage prevention, regularisation, uncertainty estimation and reproducible code.

Strong bonus

- Generative modelling: VAEs, diffusion, autoregressive approaches, language-model-style methods or GFlowNets.
- Bayesian optimisation, active learning or experimental design under tight budgets.
- Computational biology exposure: genomics, RNA or protein structure, biosequence models, ViennaRNA, Biopython, tRNAscan-SE or molecular dynamics.

Biology is not a prerequisite. We will teach the tRNA biology. Strong ML judgement, careful reasoning and the ability to learn a new scientific domain quickly matter more.

Our hiring philosophy

No PhD, specific major, institution or pedigree is required. Self-taught builders, bootcamp graduates, career-switchers and academic candidates are equally welcome when they can demonstrate the work.

- A GitHub repository or technical project.
- A paper, preprint or technical write-up.
- A deployed model or product.
- A difficult dataset you cleaned and made useful.
- A side project that demonstrates serious reasoning.

No public portfolio is acceptable when a candidate performs strongly on the paid, scoped take-home task.

How we will evaluate you

- Portfolio and short note.
- Thirty-minute mutual-fit conversation.
- Paid, scoped take-home using public data.
- Technical deep-dive into the task and previous work.
- Founder conversation about vision, ownership and terms.

What to send us

- Links to code, projects, papers or a personal site.
- Three to five sentences on the hardest ML problem you solved and how you approached it.
- Optional: what you most want to learn or build here.

Send to careers@hellokritrna.com with the subject line: Engine 01 - ML.

Logistics

- Founding, high-ownership role working directly with the scientific founder.
- Location: Noida, Uttar Pradesh - hybrid; remote may be considered for an exceptional candidate.
- Meaningful founding equity and direct influence over the platform.
- Growth path toward ML Lead or a larger technical leadership role for the right person.

We are a small early team backing a difficult scientific bet. This role is for someone who wants to own a novel problem where model decisions determine what reaches the laboratory.

Engine 01 is maintained as a trade secret. Candidates progressing beyond the first stage may be asked to sign a non-disclosure agreement; selected hires sign appropriate intellectual-property documentation before commencing work. Transloka Bio Pvt Ltd is an equal-opportunity employer and hires on evidence.