Variational Autoencoder for Collaborative Filtering

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aggregate intellect

What is a Variational AutoEncoder?

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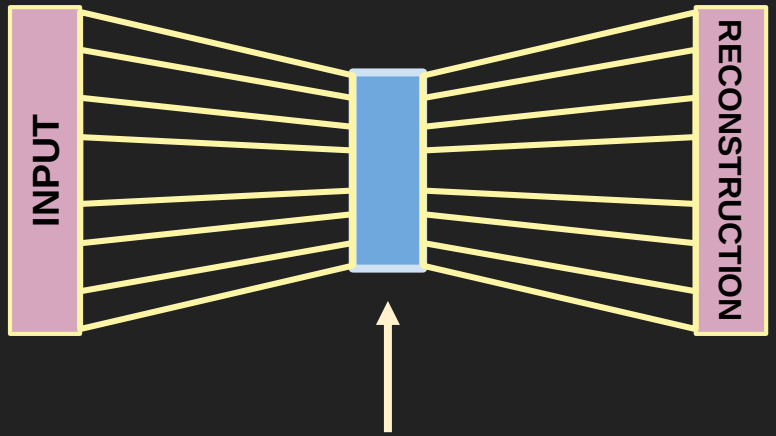
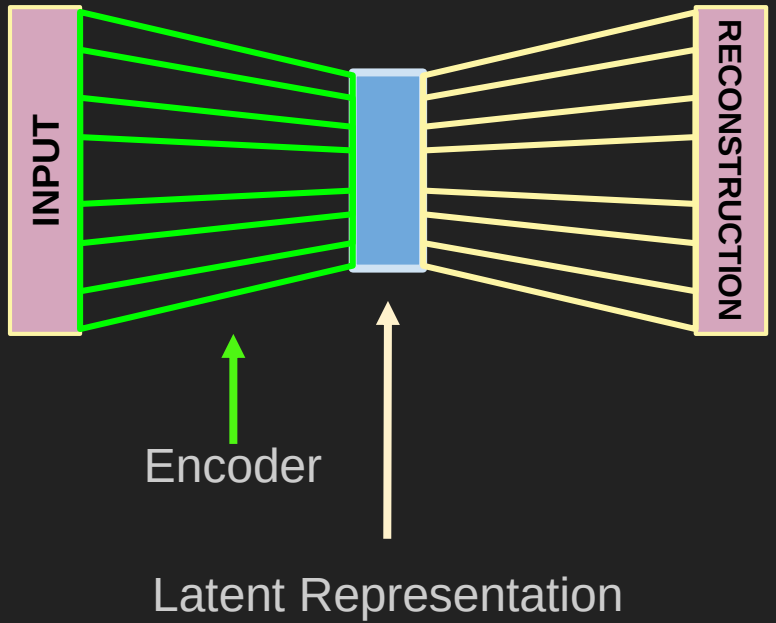


AutoEncoders:

“Compress” the information in the input in such a way that it allows reconstruction.

What is a Variational AutoEncoder?



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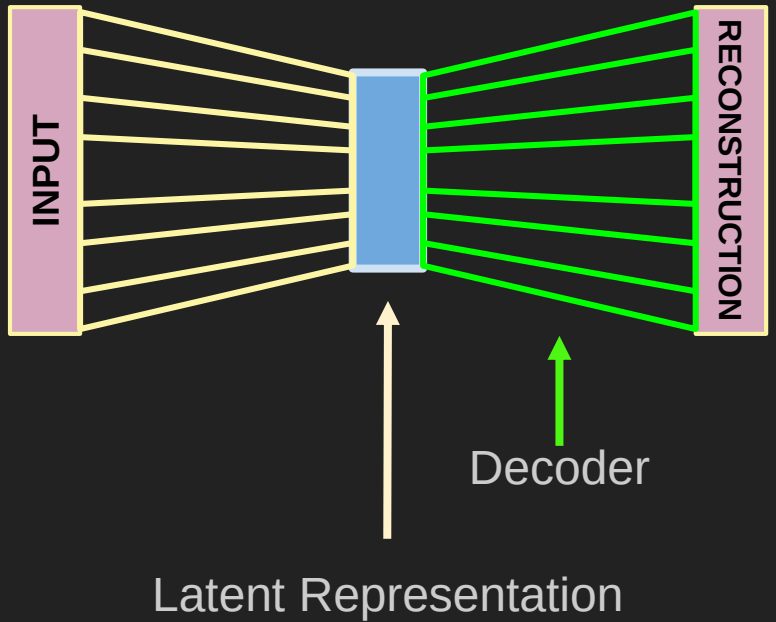

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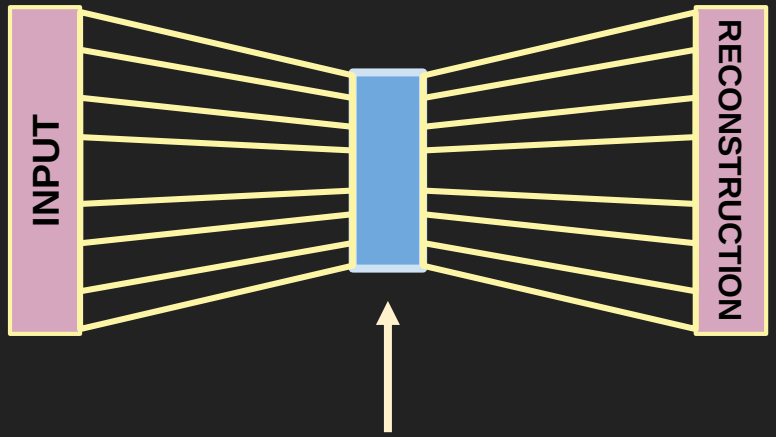

Latent Representation

MATRIX FACTORIZATION

It is a kind of autoencoder that reconstructs the input by finding linear relations in the data.

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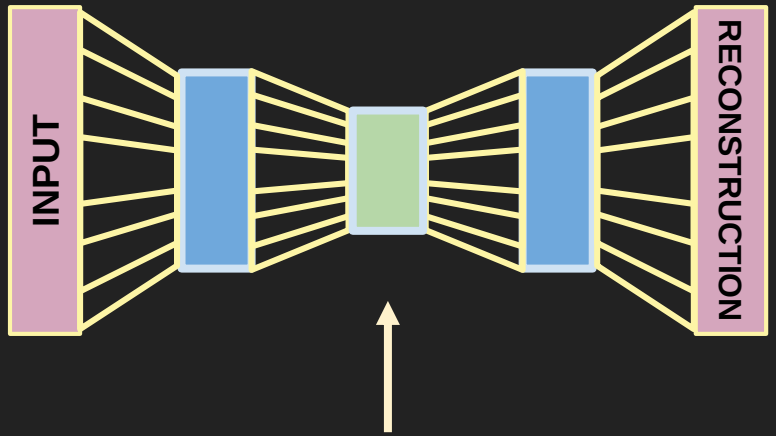

Latent Representation

DEEP LEARNING

Allows to find non-linear representations.

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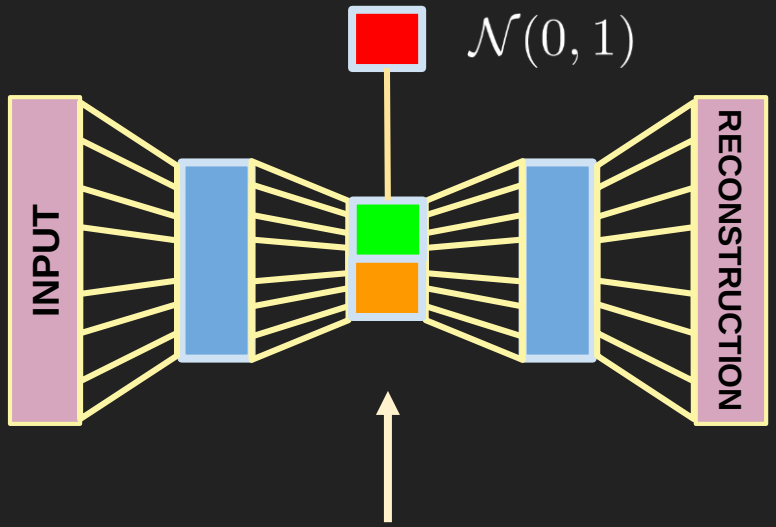
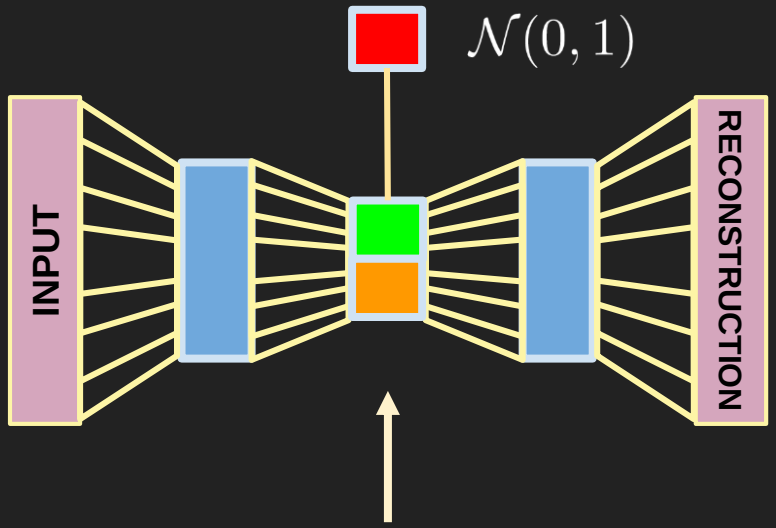


VARIATIONAL INFERENCE

Changes the latent space to be parameters for a distribution from which sampling corresponds to reconstruction.

Variational AutoEncoder for CF



Latent Representation

IMPLICIT FEEDBACK

We want to represent users in the latent space.

For every user the implicit feedback representation will be the input.