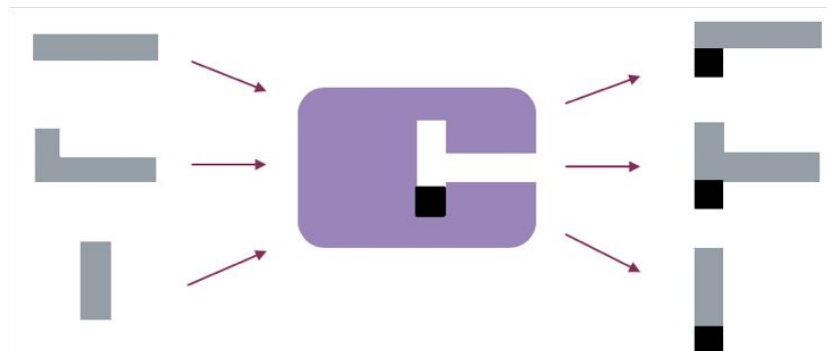


Enumerating the Entire Space of Enzymatic Reactions for Biological Pathway Design

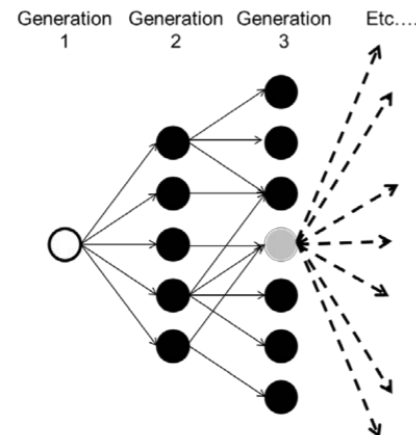
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Northwestern
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Enzymes may catalyze a range of side reactions

Research Directions:

1. Design enzymatic pathways towards vast product portfolio
2. Enhance understanding of microbial metabolism



Extract generalized reaction rules from all known enzymatic reactions

Iteratively apply reaction rules to enumerate all possible reactions

Enumerating the Entire Space of Enzymatic Reactions for Biological Pathway Design

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Metabolic In Silico Network Expansion Databases



Welcome to the home of the MINE databases. These databases expand the known metabolome using the BNICE framework with hand-curated reaction rules. If it's your first time on the website, we recommend taking one of the tours below. Access to the database is also possible through a [REST API](#). Please contact us for the latest versions.

minedatabase.ci.northwestern.edu

Goals at SI20:

1. *Learning to optimize interaction in parallel processes*
2. *Getting exposed to deep learning applications*
3. *Hearing from all of your projects!*