

# DataLab

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Department of Computer Science·AI

Dongguk University

# Research Fields



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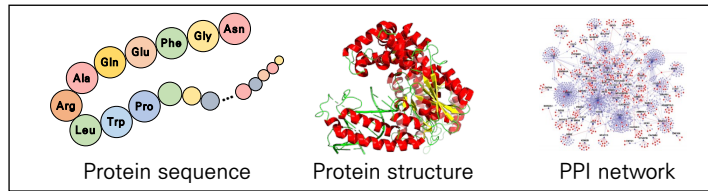
Department of Computer Science, Dongguk University, Seoul, Korea

Research on data-driven computational methods and tools for interpreting the meaning of real-world data such as large-scale biological data

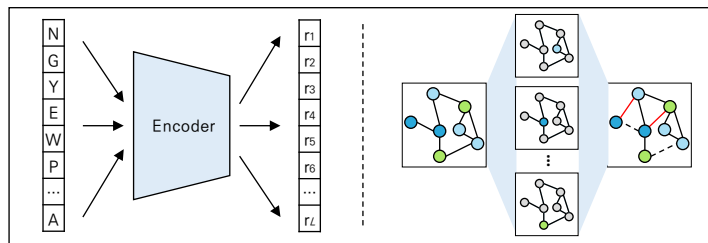
Computational Biology & Bioinformatics

Machine Learning

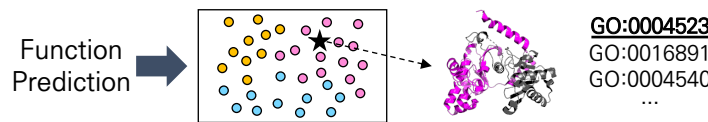
## Computational Biology & Bioinformatics



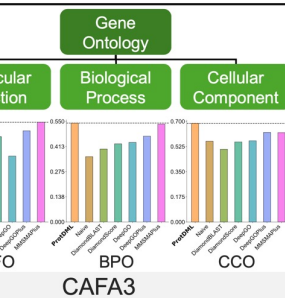
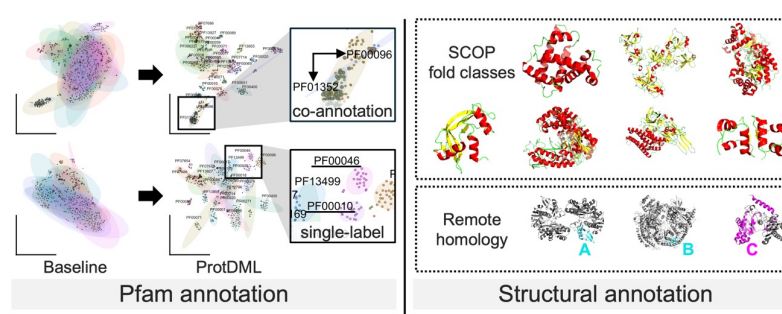
Large-scale Multi-domain Protein Data



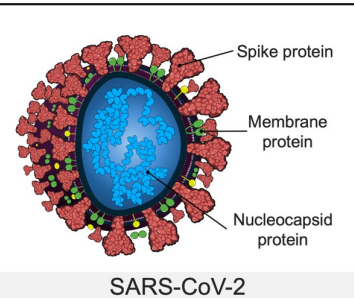
Representation Learning



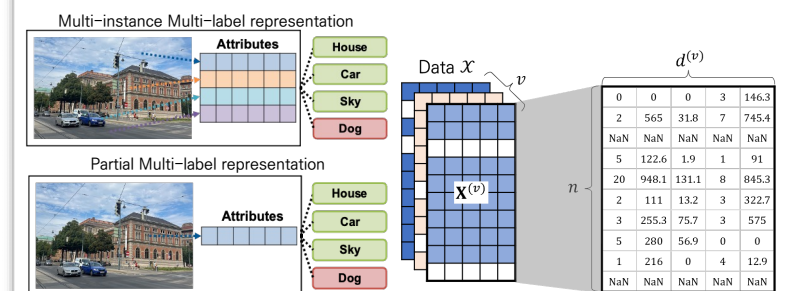
Protein Representation Learning



Protein Function Prediction

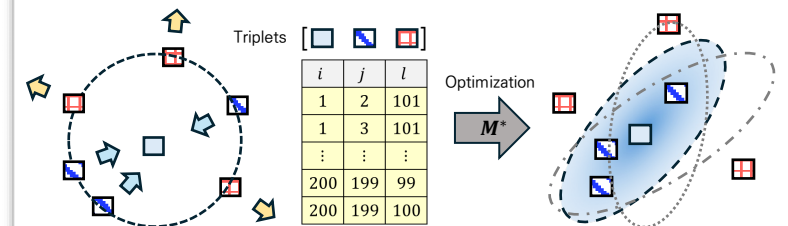


## Machine Learning



Multi-label Dataset

Multi-view Dataset

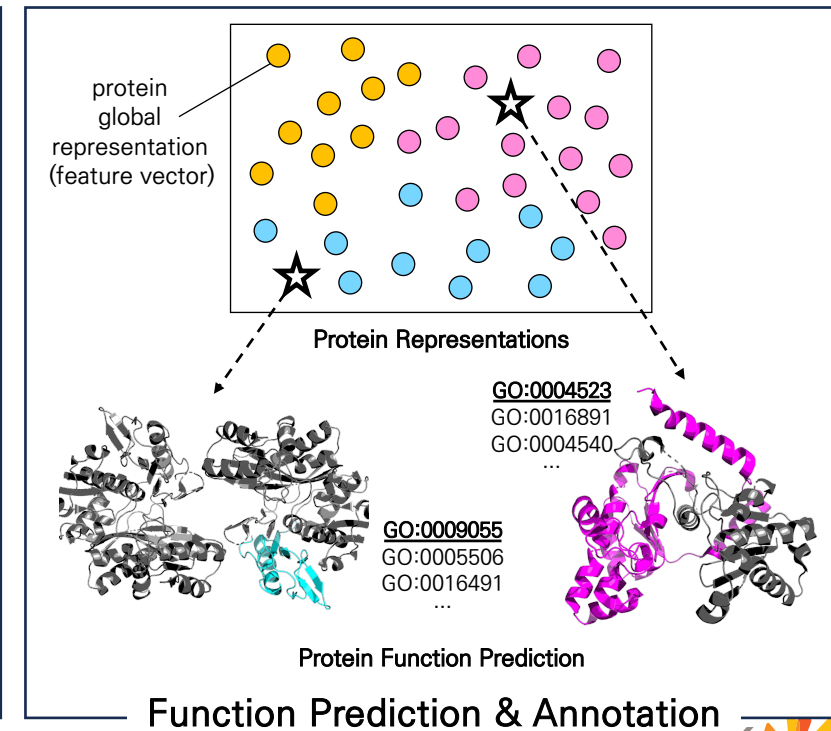
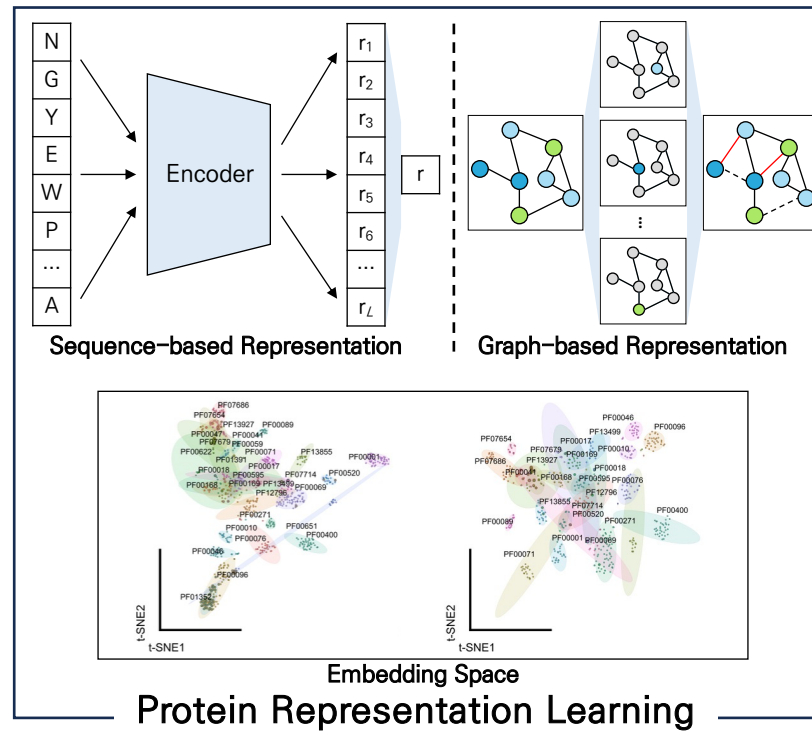
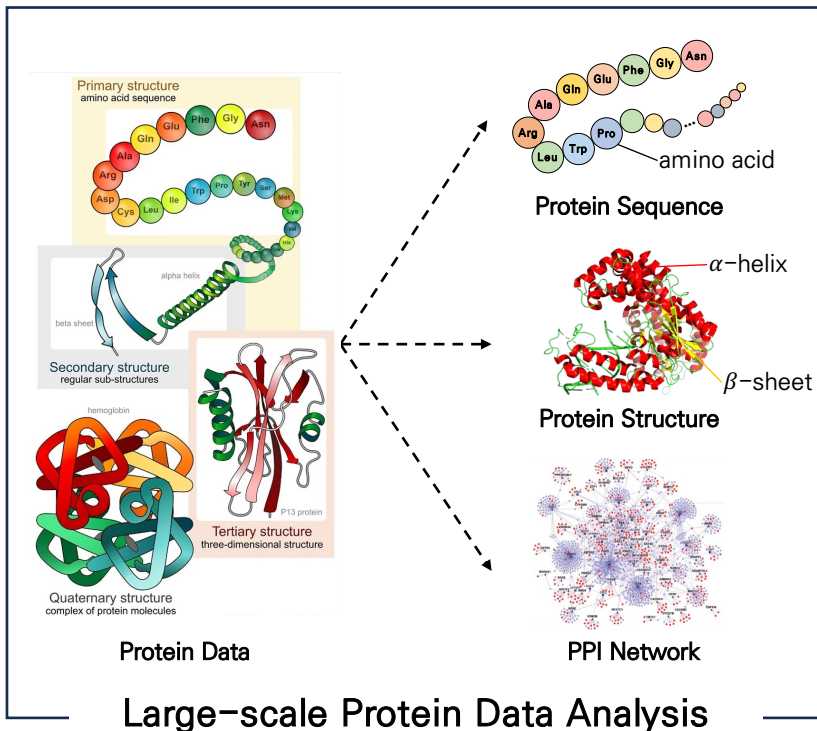


Data Analysis & Computational Methods

# Computational Biology & Bioinformatics

## ❖ Protein Representation Learning for Function Prediction

- 대규모 단백질 데이터(시퀀스, 구조, 상호작용 네트워크) 패턴 분석
- 단백질 구조·기능 예측을 위한 머신러닝 기반 표현 학습 방법론 연구
- 다양한 단백질 예측 과제와 기능 주석 자동화를 위한 모델 개발



# Machine Learning

## ❖ Machine Learning for Analyzing Diverse Data

- 다양한 구조의 데이터 표현을 활용하여 여러 도메인의 데이터 분석
- 복잡한 구조의 데이터 분석을 위한 머신러닝 알고리즘 연구
- 대용량 자료처리 및 최적화를 위한 알고리즘의 성능 개선 방법 연구

