Rui-Xi Wang

Student

I'm interested in the application of Machine Learning model to NLP, biochemistry, and finance

rxwangtw@mit.edu | 6172014561 | Cambridge, MA, USA

EDUCATION

Computer Science and Engineering/Mathematics
Massachusetts Institute of Technology

09/2022 - Present *GPA:5.0/5.0*

Courses

- 6.5831 Database System
- 6.1220 Design and Analysis of Algorithm
- 6.s898 Deep Learning(G)
- 6.1020 Software Construction
- 6.1910 Computation Structure
- 6.8611 Natural Language Processing
- 6.3900 Machine Learning
- 18.100B Real Analysis
- 6.7800 Inference and Inforation(G)
- 18.650 statistics

Department of Electrical Engineering
National Taiwan University

09/2021 - 06/2022 *GPA:4.06/4.3*

Courses

- Linear Algebra
- Discrete Mathematics
- Calculus
- SCLD
- Computer Programming
- Organic Chemistry
- Probability and Statistic
- Electronic Circuit

HONOR AWARDS

International Chemistry Olympiad Gold Medalist (08/2021)
International Chemistry Olympiad (IChO)

PUBLICATIONS

Doctoral Thesis

Benchmarking predictions of near-infrared absorption with physics-based and machine learning methods

Author(s)

KP Greenman, RX Wang, J Nam, A Subramanian

2024

Optical Property Prediction and Molecular Discovery

SKILLS

Pytorch | SQL | Database(Golang) | chemprop | rdkit | C++ | C | Python

WORK EXPERIENCE

Undergraduate Researcher
Rafael Gomez-Bombarelli's Lab, MIT

02/2023 - Present *Cambridge, MA*

Achievements/Tasks

- I created a GitHub repository that summarizes all existing databases of experimental optical properties and computational excited state properties and then make the data uniform and usable for ML. I also compared the difference between different dataset and finetuned DL models based on the dataset collected and include evidential uncertainty with Chemprop and other cheminformatics models. Second author publication under preparation

Contact : Kevin Greenman - kpg@mit.edu

Lab Assistant
MIT EECS

02/2024 - 05/2024 *Cambridge, MA*

MIT EECS

Achievements/Tasks

- Staff Office hours and lab sessions each week(10hrs) for 6.190(Intro to C and Assembly). Guide students through one-on-one debugging. Provide feedback to instructors on assignments.

Undergraduate Researcher
Coley's Group, MIT

05/2024 - Present *Cambridge, USA*

Achievements/Tasks

- Developing Deep Neural Networks and combinatorial optimization models for Mass Spectroscopy Prediction, improving current benchmark by more than 10%, expected first-auther paper submission in ICML 2025

Contact : RunZhong Wang - runzhong@mit.edu

MISTI Research Intern
Delta Biosciences

06/2023 - 08/2023 *Vilnius, Lithuania*

Delta Bioscience is a start-up company dedicated to early-stage drug discovery

Achievements/Tasks

- I have trained various machine learning models for predicting molecular properties, such as solubility and drug-likeness. Additionally, I learned how to analyze DNA Encoded Library data and employ pharmacophore modeling techniques to predict potential bonding site conformations for COVID-19 proteins.

Contact : Donatas Zmuidinavicius - donatas@deltabiosciences.com

SKILLS

Computational Chemistry | Machine Learning | TypeScript | TensorFlow

LANGUAGES

English
Professional Working Proficiency

French
Elementary Proficiency

Chinese
Native or Bilingual Proficiency