Jui-Shan (Teresa) Lin

Data Scientist · Machine learning in Genetics

New York City, NY

+814-996-9078 | sansanlin85@gmail.com | teresa-sansan.github.io/ | teresa-sansan | teresa-jui-shan-lin

Experience

Data Science Associate | *NYC, NY*

New York Genome Center | *May 2021 - Present*

- Elevate cross-ancestral risk prediction using cell-type specific functional annotations trained by deep learning models (MCMC, VI, transformer)
- Develop a genome-wide deep learning model that can better capture the causal variants in Alzheimer's Disease
- QC and data clean-up on WGS genotype and phenotype files from 36k of Alzheimer's patients and 16 millions variants

Research Assistant | *State College , PA*

The Pennsylvania State University (Advisor: Dr. Yifei Huang) | *Aug 2019 - Mar 2021*

- Thesis: Supervised Variant Prioritization and Its Evaluation
- Build a machine learning pipeline mainly with python for variant prioritization,especially in missense mutation
- Maximize the performance by comparing different statistical learning methods (i.e., logistic regression, SVM, and gradient boosting)

Education

M.S. in Bioinformatics and Genomics | *State College, PA*

The Pennsylvania State University | *Aug. 2019 - May. 2021*

B.S. in Biotechnology and Bioindustry Sciences | *Tainan, Taiwan*

National Cheng Kung University | *Sep. 2015 - May. 2019*

Skills

Programming	Python, R, Bash, LaTeX, AWK, SNAKEMAKE
Machine Learning Package	Scikit-Learn, Pytorch, TensorFlow, Pyro
High performance computing (HPC)	VM, slurm
Bioinformatics	GWAS, eQTL, Variant Prioritization, Fine-mapping, PLINK, VCFtools, IGV
Others	Pipeline building, Data Engineering, Data Visualization

Poster

Alzheimer's Disease Sequencing Project Program Review, NIH | *Bethesda, MD*

Deep learning of gene regulation and its application in cross-ancestry PRS | *Mar, 2024*

American Society of Human Genetics 2022 | *Los Angeles, CA*

Improving the trans-ancestry portability of polygenic risk scores by prioritizing variants in predicted cell-type-specific regulatory elements | *Oct. 2022*

Honors & Awards

2019	**Dean's List**, National Cheng Kung University	*Tainan, Taiwan*
2017	**Dean's List**, National Cheng Kung University	*Tainan, Taiwan*
2017	**Department representative**, Shenh Long Bio-Tech International Co., LTD	*Long An, Vietnam*
2016	**Taiwan representative**, Japan-Asia Youth academic exchange	*Osaka, Japan*
2016	**Dean's List**, National Cheng Kung University	*Tainan, Taiwan*