Ke Wang

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SKILLS SUMMARY

Programming languages Python, R, Linux

Tools Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn

EDUCATION

BE in Bio-engineering, Nanjing Agricultural University 09/2015 - 06/2019

MS in Translational Biotechnology, University of Southern California 09/2021 - present

RECENT EXPERIENCE

University of Southern California

SARS-CoV-2 Detection in Wastewater 04/2022 - present

- Benchmarked existing methods for lineage detection in wastewater samples containing SARS-CoV-2 to monitor SARS-CoV-2 variants and to predict variant abundances via computational approaches.

TRGN 515 Advanced Human Genomic Analysis Methods 11/2021 - 12/2021

- Using Random Forest to predict three fetal states with cardiotocography data.

TRGN 510 Basic Foundations in Translational Biomedical Informatics 04/2022 - 05/2021

- Compared differential gene expression in TCGA within the progression and stable patients of stage A Chronic Lymphocytic Leukemia (CLL) using DESeq2.

Nanjing Agricultural University

Thin Layer Drying and Rapid Detection of Purple Sweet Potato 08/2018 - 05/2019

- Constructed SVM and PLS models to predict anthocyanins and moisture based on optical property parameters using the single integrating sphere system.
- Peng, J., **Wang, K.**, Ma, C., Long, J., Tu, K., & Pan, L. (2021). Determination of anthocyanin and moisture content of purple sweet potatoes during drying process by their optical properties in the 400–1050 nm range. Food Chemistry, 359, 129811.

Project Coordinator of Student Research Training 09/2016 - 05/2018

- Discovery of Novel Halogenase Genes Using Libraries
- Extraction and Analysis of Nutritional Components in Pumpkin Seed Skin

Gan & Lee Pharmaceutical Ltd.

Research Assistant (R & D) 07/2019 – 06/2021

- Constructed and studied abnormal protein-producing bacteria and genetically optimized new bacteria to learn the difference in host cell protein expression.
- Developed sensitive and specific methods for the determination of host cell protein residues in E. coli ($R^2 > 0.98$, detection limit slightly below 10 ppm).