

Kuan-Hung (Peter) Yeh

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🏠 peterntuph.github.io | 📄 kuan-hung yeh | 📖 Google Scholar

HEALTH DATA SCIENTIST

Data scientist passionate in **Precision Medicine** and **Statistical Genetics** pursuing M.S. in Biostatistics at UCLA. 4+ years of hands-on research experience working with domain experts in Biotech, National labs, Universities, and Hospitals. Turning data into actionable insights to improve public health & decision-making.

Programming Languages & Toolkits: R (Markdown, Shiny), Python, Linux, SQL, Git/GitHub, SAS

Research Topics: Statistical Genetics, Precision Medicine, Machine Learning, Survival Analysis

EDUCATION

University of California, Los Angeles (UCLA)

Los Angeles, CA

Master of Science in Biostatistics (Up-to-date GPA: 3.92/4.0)

Jun. 2023 (Expected)

- Selected Courses:** Mathematical Statistics, Data Science, ML in Bioinfo

National Taiwan University (NTU)

Taipei, Taiwan

Bachelor of Science in Public Health (Overall GPA: 3.75/4.0)

Jun. 2020

- Honor Graduate** w/ Elite Scholarship & Dr. KP Chen Memorial Scholarship

- Selected Courses:** Linear Algebra, Survival Analysis, Computational Biology, Epidemiology

RESEARCH EXPERIENCES

Department of Medicine Statistics Core (DOMStat), UCLA

Los Angeles, CA

Graduate Consultant Intern, Advisor: Prof. Chi-Hong Tseng

Dec. 2022 – **Present**

- Generated statistical outputs to support a **three-arm randomized controlled trial**.
- Conducting **Mediation Analysis** to prove that intrinsic motivation explains the underlying mechanism of the relationship between interventions and health behavior for weight-loss.

Department of Computational Medicine, UCLA

Los Angeles, CA

Graduate Student Researcher, Advisor: Prof. Bogdan Pasaniuc

May. 2022 – **Present**

- Demonstrating genetic architecture impacts parameter estimation in Cox model and PGS-based risk stratification.
- Developed **survival data simulation pipeline** based on different hazard assumption

Foundation Medicine, Inc. (Affiliate of Roche Group)

Boston, MA

Biostatistician Intern, Advisor: Dr. Chang Xu

Jun. 2022 – Sep. 2022

- Designed new criteria for reproducibility in **diagnostic assay precision study** to increase statistical power by 90% while controlling type I error [\[Shiny App\]](#)
- Proposed Quality Assurance protocol based on new reagent design in **FoundationOne® Liquid CDx** (F1LCDx)
- Implemented and verified the performance metrics for new PicoGreen dsDNA Quantification reagent (TMV).

Biostatistics & Bioinformatics Core lab, NTU

Taipei, Taiwan

Undergraduate Researcher, Advisor: Prof. Tzu-Pin Lu

Jun. 2019 – Feb. 2020

- Constructed the **First Prognostic Model** for Asian Colon Cancer Patients [\[ASO '21\]](#)
- Reported the prognostic difference across different ancestry and customized a Cox model in asian population
- Provided a robust overall **survival/risk prediction** to facilitate clinical shared decision making [\[Web\]](#)
 - Best Research Poster Award** in Research Symposium, NTUPH [\[Poster\]](#)

PUBLICATIONS & PRESENTATIONS

- Han-Ching Chan, Chi-Cheng Huang, Ching-Chieh Huang, Amrita Chattopadhyay, **Kuan-Hung Yeh**, Wen-Chung Lee, Chun-Ju Chiang, Skye Hung-Chun Cheng, Tzu-Pin Lu, (2021) [“Predicting Colon Cancer-Specific Survival for the Asian Population Using National Cancer Registry Data from Taiwan”](#). *Annals of Surgical Oncology* 29:853–863
- Kuan-Hung Yeh**, Ching-Heng Lin, Tzu-Hung Hsiao and Tzu-Pin Lu, [“Genome-Wide Association Study \(GWAS\) on Metabolic Syndrome in Subjects with Abdominal Obesity in a Taiwanese Population”](#) Oral presentation at 2020 IEEE International Conference on Bioinformatics and Biomedicine (2020 IEEE BIBM).
- Kuan-Hung Yeh**, Tzu-Pin Lu, [“Using National Cancer Registry Data to Develop Prediction Model for Colon Cancer in Taiwan”](#) Poster presentation at 2019 Taiwan Public Health Joint Annual Conference.

SELECTED PROJECTS

2022 Machine Learning in Bioinformatics @UCLA [\[Link\]](#)

Los Angeles, CA

Predicting 30-day mortality for ICU Patients using the MIMIC IV dataset

Dec. 2022

- Conducted **missing data imputation** by Multiple Imputation by Chained Equations (MICE)
- Compared five **supervised learning** methods on predicting 30-day mortality in ICU Patients
- Developed an outperformed XGBoost Model with **0.72** AUC, **0.69** AUPRC and **92%** accuracy

2019 Taichung Veteran General Hospital

Taichung, Taiwan

Genome-Wide Association Study (GWAS) on Metabolic Syndrome

Sep. 2019

- Found **Novel Genetics Locus** on metabolic syndrome from genome-wide association study (GWAS)
- Analyzed and combined phenotype and genotype data to quantify the risk of metabolic syndrome
 - **Published** and **Oral Presented** at 2020 IEEE BIBM [\[Video\]](#)

2018 TMU x MIT (Sana) HIOT Hackathon

Taipei, Taiwan

1st Prize with \$3,000 USD [\[News Link\]](#)

Oct. 2018

- A Hackathon organized by **Taipei Medical University** and Computer Science and Artificial Intelligence Laboratory (CSAIL), **Massachusetts Institute of Technology**
- Proposed an Ultrasound Assisting System based on CNN for **Real-time auto examination of Internal Hemorrhage** in ICU with a **93%** accuracy rate

HONORS & AWARDS

Honor Graduate, Public Health Dept. at NTU

Jun '20

Elite Scholarship, Elite-Well Education Foundation

Fall '19

Dr. KP Chen Memorial Scholarship

Spring '19

- Dr. KP Chen is the **Father of Public Health in Taiwan**, whose most well-known contribution is to clarify the causality between Blackfoot disease and Arsenicosis
- Dr. KP Chen Memorial Scholarship is one of the **Highest Award for Public Health Undergraduates in TAIWAN**

Innovation Award, Pharmacy School at NTU

Sep '18

Dr. Jiang Jian Memorial Scholarship, Public Health Dept. at NTU

Fall '18

Best Research Poster Award, NTUPH Annual Research Symposium

Fall '18

PROFESSIONAL ASSOCIATIONS

American Society of Human Genetics (ASHG)

American Statistical Association (ASA)

Taiwan Public Health Association (TPHA)