

# Kuan-Hung (Peter) Yeh

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(707)727-5012 | ✉ [khyeho816@g.ucla.edu](mailto:khyeho816@g.ucla.edu)

🏠 [peterntuph.github.io](https://peterntuph.github.io) | [in](https://www.linkedin.com/in/kuan-hung-yeh) [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

**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 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 [\[Poster\]](#)

**Taichung Veteran General Hospital**

Taichung, Taiwan

Summer Research Intern, Advisor: [Dr. Tzu-Hung Hsiao](#)

Jun. 2019 – 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 [\[Video\]](#)

## 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

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**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

**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

**Academia Sinica (“National Academy of Sciences” in TAIWAN)**

*Taipei, Taiwan*

*Summer Research Intern, Advisor: [Dr. Da-Wei Wang](#)*

*Sep. 2018*

- Applied Machine Learning Algorithms on **National Health Insurance Data** (Health Claims Database)
- Predicted **Health Care Costs** on Ophthalmology with **83%** accuracy [\[Github Link\]](#)

## HONORS & AWARDS

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**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

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**American Society of Human Genetics (ASHG)**

**American Statistical Association (ASA)**

**Taiwan Public Health Association (TPHA)**