**Chi-Hsuan Ho**

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Objectives: Bioinformatician

**EDUCATION**

**National Taiwan University** (**NTU**) *Taipei, Taiwan*

***Master of Science in Epidemiology and Preventive Medicine***  *Sep 2016*–*Jun 2018*

• Concentration: Biostatistics, Genetic Statistics.

• Awarded the first place among 43 participants at master’s thesis poster exhibition, 2018.

• Relevant Coursework: Introduction and Application of Computational Biology Methods, Statistical

Analysis of Genetic Data, Advanced Biostatistical Methods (Generalized Linear Model, Survival Analysis).

**National Cheng Kung University** (**NCKU**) *Tainan, Taiwan*

***Bachelor of Science in Mathematics*** *Sep 2012*–*Jul 2016*

• Awarded the third place among 425 participants in the 2015 statistical competition in NCKU.

• Relevant Coursework: Calculus, Advanced Calculus, Probability, Biostatistics, Mathematical Statistics.

**EXPERIENCE**

**Dr. Chuhsing Kate Hsiao’s Lab, NTU** *Taipei, Taiwan*

***Research Assistant*** *Sep 2016*–*Jun 2018*

• Master’s thesis: “Statistical Evaluation for Methods of Gene-Set Analysis with Multivariate Non-normal

Scenarios”.

• Extracted corresponding pathway information for five types of cancer from Kyoto Encyclopedia of

Genes and Genomes (KEGG) database. (Python, R)

• Chose six mRNA gene expression datasets from NCBI Gene Expression Omnibus (GEO) data repository

and The Cancer Genome Atlas (TCGA) database.

• Normalized the gene expression data, and checked the normality of these datasets with four kinds of

multivariate normality tests. (R)

• Simulated data with mixture distributions to evaluate the performance of five gene-set analysis

methods and algorithms (Hoteling’s T2, GSEA, Global test, Global ANCOVA, N-statistic) under the non-normal scenarios. (R)

• Utilized interactive plots package,“plotly”, to visualize analyses results. (R)

• Developed radar plots and grouped dot plots to summarize the information from six plots into one plot

more efficiently and clearly. (R, plotly)

**1st Formosa Grand Challenge – Talk to AI, NTU** *Taipei, Taiwan*

***Project Assistant*** *Jul 2017*

• Effectively communicated with other assistants to evaluate and decide the scopes of questions.

• Refined the dialogue data in the shows from Taiwan Public Television using Python programming.

**The Fifth Math Camp, NCKU** *Tainan, Taiwan*

***Staff Member in Activities Department*** *Jan 2013–Feb 2013*

• Collaborated with a team to design activities for high school students.

**CERTIFICATIONS AND SKILLS**

• 2017 Information System Training Program of Computer Science and Information Engineering, NTU:

Python, Linux, MySQL.

• Software and Programing: R (excellent), Python (very good), SAS (very good), Linux (good), MySQL

(good), SPSS (good).

• Languages: Mandarin (Native), English (Intermediate).

• Skills: Data Visualization, Web Crawler, Machine Learning.