Kuan-Ting Liu

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Education

National Tsing Hua University — Hsinchu, Taiwan
B.S. IN MEDICAL SCIENCE — Sept 2013 - June 2016
- Key Courses: Introduction to Programming Design (C++), Medical Statistics and Epidemiology (R)
- Last 60 GPA: 3.96 / 4.30

National Chung Hsing University — Taichung, Taiwan
SOIL AND ENVIRONMENTAL SCIENCES — Sept 2010 - Transferred
- Total Credits Earned: 109
- Transferred to National Tsing Hua University to complete B.S.

Continuing Education

National Taiwan University (NTU) of Science and Technology — Taipei, Taiwan
DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION ENGINEERING — Sept 2018 - Present
- Course: Data Structures (3 credits)

National Chiao Tung University — Hsinchu, Taiwan
DEPARTMENT OF COMPUTER SCIENCE — Sept 2018 - Present
- Course: Introduction to Algorithms (3 credits)

Coursera
- Course: Machine Learning (Grade: 98.4 / 100) — Apr 2017
- Course: An Introduction to Interactive Programming in Python (Grade: 97.6 / 100) — Apr 2017

Work Experience

Machine Discovery and Social Network Mining Laboratory, NTU — Taipei, Taiwan
Research Assistant — July 2018 - Present
- Designed and implemented a generalized active learning framework for data labeling with quality control strategies

Data Insight and Research Laboratory, Academia Sinica — Taipei, Taiwan
Data Engineer / Research Assistant — Aug 2017 - June 2018
- Coached students in "A Hands-on Introduction to Deep Learning in Keras"
- Developed 1D multi-scale residual CNNs for non-invasive glucose measurement with EKG and PPG signals
- Implemented instance normalization and residual structure within 3D CNNs to detect early-stage neurodegeneration with MRI images

Endemic Species Research Institute — Jiji, Taiwan
Substitute Military Service — July 2016 - July 2017
- Built data visualization platform to promote citizen science and nature conservation
- Optimized data pipelines for Breeding Bird Survey Taiwan to improve the efficiency of data collection with R shiny package

Publications

- Chin-Chi Kuo, Chun-Min Chang, **Kuan-Ting Liu**, Wei-Kai Lin, Hsiu-Yin Chiang, Chih-Wei Chung, Meng-Ru Ho, Pen-Ren Sun, Rong-Lin Yang, and Kuan-Ta Chen. "Towards the Automation of Kidney Function Classification and Prediction Through Ultrasound-based Kidney Imaging Using Deep Learning" Submitted to Nature Partner Journals Digital Medicine, Pending Review.

Projects

Prediction of Fluid Responsiveness in Sepsis Patients with the Aid of Machine Learning
ACADEMIA SINICA, TAIPEI, TAIWAN — Oct 2017 - Jan 2018
- Applied feature engineering and Extreme Gradient Boosting algorithm to improve sepsis diagnosis

The Breeding Seasons of Nine Common Resident Passerines Defined by Brood Patch Index in Taiwan

ENDEMIC SPECIES RESEARCH INSTITUTE, JIJI, TAIWAN   Sept 2016 - Mar 2017
- Developed "Brood Patch Index" for the first biodiversity methodology to evaluate the monthly breeding status for each endemic avian

Timing and Duration of Moult in Relation to Sex and Age in Four Lowland Forest Passerines in Central Taiwan

ENDEMIC SPECIES RESEARCH INSTITUTE, JIJI, TAIWAN   July 2016 - July 2017
- Examined the timing and duration of primary moult of four common breeding passerines to get insight of phenological events in avian life cycles

Web Crawler for Fish Database of Taiwan

ENDEMIC SPECIES RESEARCH INSTITUTE, JIJI, TAIWAN   Dec 2016 - Jan 2017
- Coded a web scraping software to facilitate the process of data collection using R

Tsing Hua Trivia

NATIONAL TSING HUA UNIVERSITY, HSINCHU, TAIWAN   Jan 2016 - May 2016
- Developed a monopoly game using C++, combining some quizzes to help freshmen get familiar with campus

The Antimicrobial Peptide Mechanism and Efficacy in Wound Healing

NATIONAL TSING HUA UNIVERSITY, HSINCHU, TAIWAN   July 2015 - Feb 2016
- Modified the structure of the peptide to enhance wound healing efficacy and reduce toxicity

Mitochondrion Complex and Network Development in C2C12 Myoblast

XI'AN JIAOTONG UNIVERSITY, XI'AN, CHINA   June 2015 - Aug 2015
- Analyzed the differentiation process from C2C12 myoblast to myotube

Extracurricular Activities

Taiwan Data Science Conference
                                                                                   Taipei, Taiwan
Volunteer   Aug 2017 - June 2018
- Provided assistance to attendees and speakers

Mackay Memorial Hospital
                                                                                   Hsinchu, Taiwan
Volunteer   Jan 2015 - June 2015
- Provided assistance to patients in emergency rooms

International Association of Students in Economics and Management (AIESEC)
                                                                                   Hsinchu, Taiwan
Incoming Exchange Global Internship Programme Team Leader   Oct 2013 - Oct 2014
- Created 6 internships, the highest number in AIESEC NTHU's 3-year history

Honors & Awards

College Student Research Scholarship   2016
NATIONAL SCIENCE COUNCIL   Hsinchu, Taiwan

Summer Academic Research Scholarship   2015
NATIONAL TSING HUA UNIVERSITY   Hsinchu, Taiwan

Skills

Programming	Python, C++, R, Octave, LaTeX, JavaScript
Packages	Pytorch, Keras, OpenCV, Selenium, Django
Languages	English (Fluent), Chinese (Native)