

# Kevin (Jai-Hua) Yen

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jaihuayen.github.io

Citizenship: U.S. Citizen

## EDUCATION

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### The State University of New York at Buffalo

*Doctor of Philosophy in Biostatistics*

New York, USA

Aug. 2024 - Present

### National Taiwan University

*Master of Science in Biometry*

Taipei, Taiwan

Sep. 2017 - Aug. 2019

### National Tsing Hua University

*Bachelor of Science in Quantitative Finance*

Hsinchu, Taiwan

Sep. 2013 - Jun. 2017

## SKILLS

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- **Programming:** Python, R, SQL, Golang, Matlab, SAS, C, C++, Linux, Docker, Git, LaTeX

## INDUSTRY EXPERIENCE

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### QNAP

*Senior AI Software Engineer*

*AI Software Engineer*

Taipei, Taiwan

Apr. 2024 - Jun. 2024

Feb. 2022 - Apr. 2024

- Trained a ResNet50 image classification model with a 70% F1-Score across 250 image classes and optical character recognition (OCR) models using vision transformers with 90% accuracy to enable efficient customer photo searches
- Leveraged CLIP (Contrastive Language-Image Pre-Training), a multimodal model, to integrate semantic search into the NAS search engine, empowering customers to search for photos and files using human-readable descriptions instead of conventional keywords
- Deployed models on edge devices, including customer NAS systems with Tensor Processing Unit (TPU) and Neural Processing Unit (NPU) acceleration, improving data security and inference speed within constrained computing resources
- Mentored junior personnel on programming, project organization, and training OCR models

### TutorABC

*AI Algorithm Engineer*

Taipei, Taiwan

Jun. 2020 - Feb. 2022

- Created an 81% accurate customer churn detection model using random forest to decrease churn rates by 5%
- Developed an XGBoost customer purchase detection model with a 78% accuracy rate; utilized explainable machine learning method (SHAP value) to boost purchase rates and formulate targeted sales strategies
- Extracted key customer feedback using computer vision (YOLO, OCR) and natural language processing (TFIDF, BERT) models, enhancing data analysis for additional product features and improved user experience
- Accelerated the extraction, transformation, and loading (ETL) processes by 50%; consolidated by implementing Airflow for machine learning operations (MLOps)
- Mentored a junior engineer in programming, project structuring, and MLOps

## RESEARCH EXPERIENCE

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### National Taiwan University

*Graduate Student Research Assistant*

Taipei, Taiwan

Sep. 2017 - Aug. 2019

- Derived an adjusted Chao2 species richness estimator, reducing underestimation by 15% and mitigating a 10% overestimation in scenarios with very low corrected denominators while mitigating identity errors common in species surveys
- Conducted data cleaning on weed and plant cover species surveys conducted in Soft Bridge County, Taiwan, and Grand St. Bernard Pass, Switzerland

## TEACHING EXPERIENCE

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### National Taiwan University & Taipei Medical University

*Teaching Assistant Conference Lecturer*

Taipei, Taiwan

Feb. 2019

- Conducted teaching sessions for 100+ students
- Presented teaching methodologies, crafting materials, and becoming a proficient teaching assistant

### National Taiwan University

*Teaching Assistant*

Taipei, Taiwan

Sep. 2017 - Jan. 2019

- Taught statistics and linear algebra to accounting, agricultural chemistry, agronomy, and veterinary medicine majors
- Designed and delivered TA courses covering R and Excel fundamentals
- Achieved a 4.58 rating out of 5.0 from 54 students; received the Excellent Teaching Assistant Award (Top 1% evaluation score)

## PUBLICATION

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**Yen, J.-H.**, Chiu, C.-H. (2020). Richness estimation with species identity error. *Proceedings 62nd International Statistical Institute World Statistics Congress*, **Volume 6**, 401-408.