Ying Kung

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EDUCATION

National Taiwan University (NTU) — Taipei, Taiwan
Master in applied mechanics — Jul 2025
GPA: 3.62
Relevant courses: Applications of Deep Learning in Science and Engineering; Principles and Experiments of Mechatronic Systems; Stochastic Control; Electronics Laboratory
National Yang Ming Chiao Tung University (NYCU)
B.S. in Civil Engineering — Jul 2023

RESEARCH INTERESTS

Battery state analysis, electrochemical parameter estimation, and predictive modeling for energy systems; applications of artificial intelligence in robotics, autonomous systems, and electric vehicles

MANUSCRIPTS UNDER REVIEW

- **Ying Kung**, Yu-Hong Zhang, Chi-Jyun Ko, & Kuo-Ching Chen (2024). Predicting the onset of lithium plating by the full-cell voltage: A pseudo-P curve approach. Energy Storage Materials

RESEARCH PROJECTS

Research on Frequency-Specific Modeling for Battery Parameter Identification Under Aging
Graduate Research | Advisor: Prof. Kuo-Ching Chen — NTUIAM, TAIWAN. May 2025 - Present

- Developed physics-informed ML framework for electrochemical parameter estimation from partial EIS data
- Implemented a two-stage Sobol sensitivity analysis to identify aging-sensitive parameters in distinct frequency bands
- Designed band-specific Transformer models achieving sub-1% MAPE for SOH $\geq$ 75%, enabling real-time battery diagnostic

PROFESSIONAL EXPERIENCE

Liming Engineering Consultants Co., Ltd. — Taiwan
Engineering Intern — Jul 2022 — Aug 2022

- Supervised construction progress for schedule and safety compliance; reviewed blueprints, handled documentation, and coordinated with contractors

Jiang Hong Cram School — Taiwan
Part-time Problem-Solving Instructor — Sep 2023 — Aug 2024

- Taught math and physics to high school students; developed tailored problem-solving strategies to improve analytical skills

AWARDS & SCHOLARSHIPS

- Honorable Mention, Student Paper Competition, 35th National Conference on Combustion and Energy — Top student research recognition in combustion and energy engineering — May 2025
- Dean's Award, College of Engineering, National Taiwan University — Top 10% of students in each department; eligibility requires submitting a master's thesis to an international peer-reviewed journal — Aug 2025

SKILLS & INTERESTS

- **Languages:** Mandarin Chinese (native), English
- **Programming & Data Analysis:** Python, MATLAB, PyTorch; NumPy, Pandas, scikit-learn, Matplotlib
- **Software and Tools:** COMSOL, LaTeX, Excel
- **Interests:** Fitness, Gaming, Culinary exploration