HUNG YIN CHEN (KELLY)

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EDUCATION

Duke University Aug 2024 - Dec 2025
Master of Engineering, Artificial Intelligence GPA: 3.92/4
Coursework: Modeling Process and Algorithms, Sourcing Data for Analytics, Optimization in Practice, Deep Learning Applications, Large Language Models, Business Fundamentals for Engineers

National Cheng Kung University (NCKU), Tainan, Taiwan Sep 2019 - Jun 2023
Bachelor of Management Science, Industrial and Information Management GPA: 3.91/4.3
Coursework: Linear Algebra, Database Management, Data Structure, Probability and Statistics

SKILLS

Technical skills: Python, LLMs, Computer Vision, AWS, Google Cloud, Git, SQL, Power BI, Tableau

WORK EXPERIENCE

Hera Fertility / AI Researcher New York, NY (Remote) | Jan 2025 - Present
- Developed an AI-powered fertility report analysis system by leveraging the Gemini model for PDF data extraction and machine learning for predictive modeling to identify fertility probability and provide personalized insights, achieving an ROC-AUC score of 0.96 with our model.

Earthbook / Machine Learning Engineer Intern Hsinchu, Taiwan (Remote) | Jul 2022 - Jan 2023
- Developed machine learning models in Python for time-series solar energy data, using linear regression and LSTM to accurately predict power output fluctuations, achieving an R-squared value of 0.952 to maximize energy efficiency.
- Implemented YOLO-based computer vision with drone imagery to detect solar panel obstructions, optimizing maintenance and energy efficiency.

National Taiwan University(NTU) / Data Visualization Intern Taipei, Taiwan | Summer 2022
- Developed interactive dashboards to analyze NTU's campus energy usage with Tableau and Power BI, identifying conservation opportunities and supporting SDGs through data-driven insights, earning the Best Presentation Award for effectively communicating findings.

PROJECTS

Fundus Image Prediction for Diabetic Retinopathy @ Duke Spring 2025
- Built computer vision-based deep learning models for diabetic retinopathy detection , improving F1 score by 32% over classical ML models, achieving 0.8214 F1 with VGG16.
- Applied Explainable AI (Grad-CAM) for model interpretability, measuring Intersection over Union with the expert-labelled dataset, and built a web application for real-time diabetic retinopathy detection.

RAG-Based Career Guidance System @ Duke Spring 2025
- Built a Retrieval-Augmented Generation (RAG)-based career guidance system by implementing text processing, semantic search, and retrieval pipelines, improving career insights from diverse resumes.

Automated Evaluation of Startup Pitches @ Duke Spring 2025
- Developed an AI tool to evaluate startup pitches using GPT-4o scoring and deep learning models (BERT, Llama3.2) on ~500 YC videos.
- Achieved a QWK score of 0.72 by fine-tuning Llama3.2 with chain-of-thought distillation, outperforming traditional ML approaches by 48%.

LEADERSHIP EXPERIENCE

Head of Student Outreach, Duke AI Competition Club Sep 2024 - Present
- Organized a 300-participant AI hackathon, fostering an AI community through innovation.
- Submitted an AI safety proposal on addressing the creation of fake information and was selected for the Congressional Exhibition on Advanced AI, hosted by the Center for AI Policy at Washington, D.C.

Vice President, NCKU Entrepreneur Association Club Feb 2022 - Jul 2022
- Organized workshops on startup skills and led events like a proposal competition and innovation forum, managing association operations and communications.