Kuan-Chen Chen

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EDUCATION

University of Florida **Gainesville, FL**
Master of Science in Applied Data Science *8/2024- Present*
National Sun Yat-Sen University **Kaohsiung, Taiwan**
Bachelor of Science in Applied Mathematics *9/2019 – 6/2023*
***Honors & Awards*:** The Valedictorian of Department of Applied Mathematics, Distinguished Service Award

WORK_EXPERIENCE

Florida Gators Women's Basketball **Gainesville, FL**
Data Scientist Intern *8/2025- Present*

- Built analytical models on opponents' historical offensive data to support lineup optimization and defensive strategy design, targeting improved team efficiency and March Madness qualification.
- Developed interactive dashboards by Shiny app visualizing player and opponent statistics, integrating trend analysis and player-to-player performance comparison.

Bioinformatics Lab, University of Florida **Gainesville, FL**
Student Research Assistant *12/2024- Present*

- Analyzed blood protein data from AZ patients and identified key disease indicators through pattern analysis, enabling medical teams to better predict severity levels and develop targeted treatment plans based on validated biomarkers.

Optimized AI Conference **Atlanta, GA**
Volunteer Staff *4/2025-4/2025*
Glory Integrated Marketing Co. Ltd **Taipei, Taiwan**
Data Analyst Intern *8/2023 -12/2023*

- Analyzed multi-platform engagement data (Facebook, Instagram, Blog) using Python, SQL, and Tableau; applied NLP (TF-IDF) and regression models to identify high-impact keywords and optimize SEO performance.

PROJECT EXPERIENCE

cAIuldron, University of Florida **Gainesville, FL**
Individual project *8/2025-12/2025*

- Engineered end-to-end ML pipeline integrating CLIP (ViT-Base) and DETR (ResNet-50) for multi-ingredient detection, achieving 88% F1 and 85–95% accuracy across 525+ ingredient classes using two-stage zero-shot classification with USDA FoodData Central integration.
- Fine-tuned Llama 3.2 1B (1.2B parameters) with QLoRA on consumer GPU (RTX 3060, 6GB VRAM), training only 0.23% of parameters (2.8M) to achieve 92/100 quality score—demonstrating parameter-efficient fine-tuning on 7,913 curated recipes from RecipeNLG dataset.
- Built modular production system with 5 independent components (ingredient detection, nutrition estimation, recipe generation, validation, Gradio web UI) featuring LLM-based fallback validation, processing complete pipeline in 15–25s with 98%+ recipe completeness rate.

Cross-League Sports Career Modeling System, University of Florida **Gainesville, FL**
Individual course project *1/2025-5/2025*

- Engineered multi-sport prediction pipeline using NFL/NBA/FIFA datasets (1,800+ athletes) with hierarchical position encoding (e.g., NFL: 18→8, NBA: 5→3) and BMI-based feature engineering
- Optimized 5 regression models (Linear, Ridge, Lasso, Random Forest, Gradient Boosting) via GridSearchCV hyperparameter tuning, achieving sport-specific best performance; deployed interactive Dash application for 10-year career trajectory forecasting.

Climate Change Innovation Competition, The Ministry of Education **Taipei, Taiwan**
Leader of Calming Campus Project Team *10/2022 – 5/2023*

- Developed the **DARTS system** for pedestrian flow and bicycle prediction in a **Net Zero / Vision Zero campus**, achieving **86.1% accuracy** and reaching **finals among 121 teams**.

SKILLS

- **Programming Languages**: Python, R, SQL, C, Go | **Visualization**: Power BI, Tableau