Hsiang-Chun (Nathan) Wang

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WORK EXPERIENCE

UC Capital (AUM: US$500M / NT$15B) **10/2024 – 12/2025**

Machine Learning Quantitative Researcher (full-time until 06/2025, extended as contract role) *Taipei, Taiwan*

- Spearheaded the redesign of an institutional trade execution system, ultimately developing a risk-controlled statistical decision framework that improved average execution price by **1 basis point (bp)** (≈ **US$1.3M** (NT$40M) annual profit uplift).
- Established the company's first trusted market data foundation by validating and standardizing over **10.8TB** of tick-level trading data (2 years, 1,800 stocks), replacing 12+ fragmented datasets with a centralized source adopted across trading and AI teams.
- Developed an interpretable limit-up stock ranking system by transforming 5 trader heuristics and adding 8 features, reducing stock selection time from 2 hours to 30 mins, improving next-day returns by 0.5%, yielding **US$30M+** (NT$1B) annual trading impact.

Independent **01/2026 – present**

Machine Learning Engineer *Taiwan*

- Quantified the impact of Strait of Hormuz blockade on capital flows and market risk, deriving risk signals for portfolio exposure.
- Developed a reinforcement learning system for laptop thermal control, improving system efficiency under dynamic workloads.

RESEARCH PROJECTS

Diffusion-Reward Adversarial Imitation Learning **04/2023 – 08/2024**

Co-first Author and Project Lead, Paper, Project Page, Code *Neural Information Processing Systems (NeurIPS) 2024*

- Spearheaded a joint research project with a senior NVIDIA researcher, driving research direction and cross-team execution.
- Identified a flawed modeling assumption through **first-principles analysis**, pivoted the research direction, and transformed a stalled project into a NeurIPS 2025 publication.

Diffusion Model-Augmented Behavioral Cloning **06/2022 – 05/2024**

Co-first Author and Project Lead, Paper, Project Page, Code *International Conference on Machine Learning (ICML) 2024*

- Initiated and validated a diffusion-based imitation learning framework, leading the full research cycle from idea formulation to empirical validation, including iterative refinement under reviewer feedback.
- Expanded the lab's research directions, inspiring **5+ follow-up projects**, including 2 accepted at top-tier conferences or adopted in industry collaborations, while coordinating research execution across PhD students and interns.

EDUCATION (PHOTOS)

National Taiwan University (NTU) **09/2022 – 06/2024**

M.S. in Communication Engineering *Taipei, Taiwan*

- Spearheaded reinforcement learning research, leading to first-author publications at ICML and NeurIPS with **over 90 citations**.
- Won TAAI Best Master's Thesis Award (top 5 nationwide) and **NTU Best Master's Thesis Award** (top 3 in department).
- Selected as reviewer for ICLR 2025 and NeurIPS 2025–2026, recognizing ML contributions.

Shanghai Jiao Tong University (SJTU) **09/2018 – 08/2022**

B.S. in Information Engineering *Shanghai, China*

EXTRACURRICULAR PROJECTS & LEADERSHIP

Autonomous Driving Team, Algorithm Group **08/2019 – 12/2020**

Algorithm Team Leader, Competition *Shanghai, China*

- Spearheaded a LiDAR-SLAM + lightweight YOLO-based perception system for an autonomous racing vehicle, enabling real-time obstacle avoidance under embedded constraints and improving detection success rate from 60% → 88%.
- Implemented a closed-loop data iteration framework (logging, relabeling, retraining failures) and coordinated cross-functional hardware integration (sensor placement, latency, compute limits), while supervising junior members during system testing and validation.

RoboMaster Robotics Team, Algorithm Group, Second Place in 2019 National Competition **12/2018 – 09/2019**

Algorithm Team Member, Competition, Code *Shanghai, China*

- Collaborated on real-time perception and control systems for armor detection and targeting under competition constraints.
- Diagnosed auto-aim instability via camera calibration and perception debugging, separating perception from sensor-related issues.

University Debate Team **09/2018 – 02/2020**

Debater and Peer Coach *Shanghai, China*

- Mastered debate techniques via Freshman Cup training; selected to represent the department in university-wide competitions.
- Mentored **8+ junior debaters**, designing and delivering **3+ training workshops** on rebuttal strategies and critical reasoning.

SKILLS/QUALIFICATIONS

Programming & Systems	Python (advanced), C/C++ (coursework), Linux, Git, Docker
Machine Learning	Deep Learning (PyTorch), NLP (HuggingFace), Computer Vision (OpenCV), ML (Scikit-learn)
Data & Infrastructure	NumPy, Pandas, SQL (SQL Server, MariaDB), Weights & Biases
Interests & Languages	Snowboard (intermediate), LEGO (50+ sets built), Tennis (beginner), English (TOEFL 94)