

Po-Chung (Bryan) Hsieh

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EDUCATION

University of California, San Diego <i>Master of Science in Electrical and Computer Engineering</i>	Sep 2026 – Jun 2028 (Expected) La Jolla, CA, USA
National Taiwan University <i>Bachelor of Science in Electrical Engineering</i>	Sep 2021 – Jun 2026 Taipei, Taiwan

INDUSTRY EXPERIENCE

Inventec Artificial Intelligence Center <i>LLM Engineer Intern</i>	Jul 2025 – Jun 2026 Taipei, Taiwan
<ul style="list-style-type: none">– Proposed a dual-process scaffold reasoning framework for LLM code debugging, achieving an 88.91% pass rate on DebugBench and outperforming prior prompting methods.– Built a NeMoClaw-based agent backend that automated thermal-design exploration and component-placement optimization for 30 notebook system-design teams.– Developed an automated circuit-validation system supporting 20 antenna engineers, enabling design verification without specialized circuit-design software.	

RESEARCH EXPERIENCE

cfDNA-Scientist: Multi-Agent Biomedical Feature Discovery <i>Project Lead</i>	Jun 2026 – Oct 2026 Remote – Northwestern University
<ul style="list-style-type: none">– Built cfDNA-Scientist, a self-evolving multi-agent system that autonomously proposes, implements, and evaluates biomedical feature-extraction code in executable research environments.– Designed a preliminary literature-search workflow to identify established cfDNA fragmentomic features, build a feature catalog, and validate baseline performance.– Evaluated cfDNA-Scientist on breast cancer detection, achieving a cross-validated AUC of 0.916 compared with the baseline’s 0.831 under the same evaluation protocol.	
DoMinO: Discrete Flow-Matching Policy Optimization <i>Project Co-Lead</i>	Feb 2026 – Apr 2026 Remote – Northwestern University
<ul style="list-style-type: none">– Co-developed DoMinO, a reinforcement learning framework that formulates discrete flow-matching inference as an inner Markov decision process, enabling exact trajectory log-likelihood optimization.– Implemented REINFORCE- and PPO-based fine-tuning methods with cross-entropy and generalized KL regularization to mitigate reward hacking and preserve sequence naturalness.– Evaluated DoMinO on regulatory DNA and protein design, outperforming prior state-of-the-art baselines by 10.6% on DNA predicted activity and 15.4% on protein pred-ddG.	

PUBLICATIONS & HONORS

2026	M. Su, P.-C. Hsieh , et al. <i>Discrete Flow Matching Policy Optimization</i> . Submitted to NeurIPS 2026.
2026	K.-Y. Chen, Y.-C. Lin, P.-C. Hsieh , et al. <i>The Binding Effect: Analyzing How Multi-Dimensional Cues Form Gender Bias in Instruction TTS</i> . Accepted to INTERSPEECH 2026.
2025	P.-C. Hsieh , C.-P. Chen, et al. <i>Dual-Process Scaffold Reasoning for Enhancing LLM Code Debugging</i> .
2023	AI Cup Competition for Credit Card Fraud Detection – Top 5% overall.

SKILLS

Programming: Python, Bash
ML/AI: PyTorch, Hugging Face, scikit-learn, NumPy, Pandas, Reinforcement Learning, LLM Agents
Tools: LangGraph, Docker, Linux, Git, Microsoft Azure, LangChain
Languages: Mandarin Chinese (Native), English (Professional), Japanese (JLPT N2)