Yi-Fan (Nancy) Wang

West Lafayette, IN | +1 (765) 409-6597 | wyf4application@gmail.com
linkedin.com/in/yi-fan-wang-a55ba6201/

EDUCATION

Purdue University, West Lafayette, IN — Aug 2024 – Present (Expected May 2026)
Master of Science in Electrical and Computer Engineering (MSECE)
Focus: Microelectronics and Advanced Semiconductor

National Taipei University of Technology (NTUT), Taipei, Taiwan — Sep 2020 – Jun 2024
Bachelor of Science in Electrical Engineering (BSEE)

WORK EXPERIENCE

Hewlett Packard Enterprise (HPE), Taipei, Taiwan — Jul 2023 – Jul 2024
AC Power Engineering Intern

- Performed precision soldering of SMD components including 0201, 0603, and 0805 packages for prototype assembly and circuit debugging.
- Conducted efficiency, thermal, and EMC tests to evaluate AC power supply performance and ensure compliance with design specifications.
- Implemented detailed AC power path analysis and troubleshooting using oscilloscopes, current probes, and high-voltage differential probes.
- Analyzed failure behavior in power stages by isolating switching waveform anomalies, thermal hotspots, and device breakdown modes.
- Collaborated with senior engineers to interpret power converter schematics, PCB layouts, and component derating requirements.

RESEARCH EXPERIENCE

Birck Nanotechnology Center, Purdue University — Sep 2024 – Jun 2025
Graduate Researcher
Title: "Parametric Test Pattern Design & Fabrication"

- Designed lithography test structures (e.g., serpentine resistors, cross-bridge, MOSCAP) for process characterization.
- Fabricated full-wafer test patterns in KLayout, exploring 8-inch wafer process integration through cleanroom photolithography and etching.
- Analyzed parametric data to monitor sheet resistance, contact resistance, and uniformity.
- Built hands-on experience in device characterization using a 4-probe station, AFM, etc.

Laboratory Project, NTUT — Feb 2022 – Jan 2024
Research Assistant
Title: "Research on the Development and Optimization of Generative AI Models with Edge Computing Technology: A Case Study on Person Detection."

- Implemented generative AI models using Stable Diffusion and image recognition with YOLOv5 on a 10k+ image dataset, achieving mAP@50 = 0.85 for person detection.
- Co-authored the project paper, awarded Honorable Mention, 2023 International Workshop on Consumer Electronics.

SKILLS

Languages: Mandarin Chinese (native), Taiwanese (fluent), English (fluent)
Programming languages: C++, Python, MATLAB
Design Tools: OrCAD, PSpice, KLayout, Altium Designer