Claire Chen

ccz@alumni.cmu.edu
github.com/clairec03
linkedin.com/in/clairecch

EDUCATION

Carnegie Mellon University

*Bachelor of Science, **Computer Science*** — *Aug 2021 - May 2025*

- Concentrations in **Machine Learning**, **Security & Privacy**
- Graduated with Senior Leadership Recognition for interdisciplinary human-computer interaction research
- **Coursework**: Operating Systems, Usable Privacy & Security (Graduate), Reinforcement Learning and Control (PhD), Generative AI (Graduate), Deep Learning (Graduate), Distributed ML (Graduate), Parallel Computer Architecture, Adversarial ML (PhD)
- **Honors**: HackCMU 1st Place Winner, Red Robot Hackathon 1st Place Winner, Hack112 @ CMU 1st Place Winner, Splunk Grand Hackathon Finalist, CMU Gen AI Research Poster Session 1st Place Winner, ML Model Training Course Competition @ CMU 2nd Place Winner, National Merit Commended Scholar (99th percentile PSAT), NCWIT Award for Aspirations in Computing

EXPERIENCE

Microsoft — Redmond, WA

Software Engineer - Azure Core HPC/AI Training Platform team (AI Supercomputing) — *July 2025 - Current*

- Building uncore performance monitoring service for NVIDIA GB200 from conception to prod, enabling low-level memory traffic visibility for AI training workloads in real-time monitoring & post hoc analysis. Champion customer needs through feature prioritization.
- Drove cross-team collaboration with OS and Hyper-V teams; secured stakeholder alignment on scope & requirements.
- Grounded design decisions, conducted testing, accelerated development timelines, ensured security compliance for exposure to VMs.
- Winner, capstone hackathon at Microsoft's internal Azure Engineering Boot Camp among 20 teams

Microsoft — Redmond, WA

Software Engineer Intern - Azure Core HPC/AI Training Platform team (AI Supercomputing) — *May 2024 - Aug 2024*

- Built predictive ML with Spark in Databricks for proactive failure predictions of nodes in NVIDIA H100/A100 clusters
- Trained and validated LSTM models for 31 scenarios achieving near-perfect accuracy, 94% precision, 95% recall
- Performed EDA and feature engineering on 30+ billion rows of data. Built efficient, scalable compute health visualization dashboards.
- Engineered ETL data pipelines with automated processing, transformation, and scheduled data ingestion workflows

Splunk (Acquired by Cisco) — Remote, US

Software Engineer Intern - Performance, Scalability, and Reliability — *Jan 2024 - Apr 2024*

- Triaged Core Search performance KPIs and optimized test runtime by 43%, delivering substantial cloud cost savings
- Worked full-time alongside Spring 2024 coursework and research at CMU; Splunk Hackathon Finalist among 92 teams

Carnegie Mellon University — Pittsburgh, PA

Head Teaching Assistant and Teaching Assistant for Computer Security (15-330/18-330) — *Aug 2023 - Dec 2024*

- Managed 7 TAs and course logistics for 120+ CS/ECE students. Led technical boot camps & recitations; designed assignments.
- Provided debugging support and conceptual explanations on Software Security, Cryptography, Network Security, and Human Factors

Stryker — Remote, US

AI Systems Software Engineer Intern - MLOps team — *May 2023 - Aug 2023*

- Implemented features and testing infrastructure for internal DevOps CLI tool supporting AI research with Azure
- Developed data processing pipelines and augmented datasets for ambient intelligence use cases in operating rooms

Carnegie Mellon University (CyLab Security and Privacy Institute) — Pittsburgh, PA

Usable Privacy & Security Researcher — *Feb 2023 - May 2024*

- **First-author publication and presentation**: *Is a Trustmark and QR Code Enough? (in ACM CHI Conference '24)*
- Conducted usable privacy research studying 1K+ consumers' comprehension of IoT security and privacy labels
- Contributed to findings presented at White House launch of US Cyber Trust Mark programs; findings informed FCC policy discussions.
- Presented poster at Symposium on Usable Privacy (2023), gave research talk at CMU's Graduate Privacy Engineering Seminar
- Built websites with session tracking and adaptive surveys, designed experiments, automated statistical analysis in R & Python

LEADERSHIP & COMMUNITY

- **VP of Corporate Relations, Women in Cybersecurity @ CMU**: Transitioned WiCyS student org from college-exclusive to all-campus organization. Secured industry sponsorships through networking. Curated speaker series featuring OpenAI, PwC, Nike, Capital One. Organized an 80+ participant CTF competition across CMU's Pittsburgh and Silicon Valley campuses.
- **Pro Bono Consultant Project Lead, Undergraduate Consulting Club**: Semester-long engagement for Pittsburgh Freshii franchise. Delivered SEO marketing strategy, competitor analysis, data-driven pricing recommendations for sustainable growth.
- **Fundraising Lead, Women@Microsoft Scholarship**: Fundraise for global high school students intending to pursue STEM in the US, targeting $70k annually from employees and external audiences. Presented at company-wide expo for university- and MBA-hires.
- **Student Representative for Security & Privacy Concentration, School of Computer Science Volunteer Tour Guide**: Introduced the S&P concentration to first-year computer science students and led campus tours for prospective students

SKILLS

Languages: C, C++, Python, Go, Rust, Java, R, SQL, JavaScript, SML, x86/x64 Assembly; fluent in Mandarin, English, Spanish
Data: PyTorch, TensorFlow, Spark, NumPy, Pandas, Scikit-learn, OpenCV, Power BI, SQL, KQL, Python, R, Power Query
Cloud & HPC: Azure, AWS, Databricks, GitLab CI/CD, Docker, Kubernetes, Git, Google Colab, CUDA, OpenMP, MPI, SLURM
Software Development & Web: Svelte, HTML, CSS, JavaScript, profiling (perf, Valgrind, GDB), Linux, Bash, LaTeX, Vim, Agile
Certifications: Microsoft Certified Azure Data Scientist Associate

TECHNICAL PROJECTS

- Designed & implemented a Unix-style OS with kernel, VM, preemptive multitasking, device drivers, syscalls from scratch *Spring 2025*
- Parallel implementations of VLSI wire-routing algorithms with OpenMP and MPI *Mar 2024*
- Efficient, parallel, and modular video renderer in CUDA C++ on NVIDIA RTX 2080 GPU *Feb 2024*
- Programmed a dynamic memory allocator, shell, web proxy, and cache in C with Unix library *Jul-Aug 2022*