My (Chiffon) Nguyen

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Research Interests

Human–AI systems to reshape how people access, trust, and collaborate around *knowledge*. My interests include 1) **multilingual and cross-cultural adaptation**, 2) **AI alignment**, knowledge editing and unlearning, memory mechanisms, and 3) **human-AI collaboration** such as human-AI bidirectional alignment, synergy, and cooperative AI.

Education

Minerva University, College of Computational Sciences Sep 2021 — May 2025
B.S in Computational Sciences (Machine Learning and Statistics), GPA: 3.7/4.0 *San Francisco, CA, USA*

- Relevant Coursework: Machine Learning, AI Ethics, Bayesian Modeling, Statistical Modeling and Causal Inference, Optimization Methods, Software Engineering
- Self-study: Advanced Webdev (CodePath, 2025-ongoing), ARENA AI Safety (2025), Natural Language Specialization (deeplearning.ai, 2024), Machine Learning Specialization (deeplearning.ai, 2022)

Research Experience

Capstone/Thesis: Automated Mnemonic Generation Oct 2024 — Mar 2025
Minerva University (Advisor: Patrick Watson) *San Francisco, CA, USA*

- Developed an AI system that generate mnemonics for advanced English vocabulary learning by leveraging linguistic features (such as etymology, morphology, phonetics, orthography)
- Implemented **chain-of-thought distillation pipeline**: generated 10k synthetic reasoning examples from DeepSeekR1 teacher model, then fine-tuned Gemma3-1b student model using LoRA (rank-16) via HuggingFace transformers and trl libraries
- Applied **Direct Preference Optimization (DPO)** on 500 accepted-rejected pairs to align model outputs with mnemonic effectiveness criteria (memorability, clarity, and strength of association), achieving statistical significance

Machine Learning Research Assistant Jun 2024 — Aug 2024
AI & Mixed Reality Lab, Landshut University of Applied Sciences *Landshut, Bavaria, Germany*

- Implemented **3D object detection pipeline** using LiDAR point clouds and PointPillars algorithm in PyTorch and NVIDIA TAO Toolkit for autonomous navigation research
- Conducted comparative analysis of model performance across standard vs. synthetic datasets

Causal Inference Research Intern (Replication and Extension) Nov 2023 — Dec 2023
Minerva University (Advisor: Professor Alexis Diamond) *Remote*

- Replicated and extended Chrisinger (2021)'s causal inference of Philadelphia's beverage excise tax effects on SNAP benefit redemption using synthetic control in R; identified limitations in claimed effect size of the policy and dataset

Teaching Experience

Minerva University

Lead Teaching Assistant, PR51 Programming with Python Spring 2025

- Taught weekly labs for 40+ first-year students covering computer systems, Python fundamentals, object-oriented programming, debugging, security, and data structures
- Produced data-driven recommendations using Google Drive API, Google Sheet trackers, student and tutor surveys

Lead Teaching Assistant, FA50/FA51 Formal Analyses Fall 2023 - Spring 2024

- Guided 100+ freshmen per semester in formal logic, probability, and algorithmic thinking during office hours. Provided personalized feedback on 25 quizzes and assisted grading three assignments.

Community Engagement & Services

- Jul 2025 - Present: **Communication and Software Engineer** at SEACrowd (AI research for Southeast Asia), building website, managing crowdsource data annotation, and running small-scale experiments
- Jul 2025 - Present: Volunteer at CommonCrawl, helping with web language crawl and identification

Selected Projects

Astro Scholar Theme (github.com/mychiffonn/astro-academic) Aug 2025 — Present

- Academic portfolio template with 50% faster rendering and reduced memory with caching
- Support publication parsing from bibtex and technical blogging with Markdown, MDX, KaTeX, and code highlighter
- 80+ SEO score, 100 Lighthouse scores, with internationalization and timezone support

SeizureSavvy (github.com/mychiffonn/SeisureSavvy) Feb 2024 — Apr 2024

- Managed a team of 4 to build a Progressive Web App for intuitive seizure management with machine learning-based predictive alerts in Flask (Python), React, and Chakra UI
- Enhanced data logging and medication tracking, increasing user data accuracy by 35%
- Conducted code reviews in Python and React JavaScript, cutting 40% critical bugs and enhancing application stability

Technical Skills

Programming: Python, TypeScript, R, SQL, Bash
Machine Learning & Statistics: PyTorch, HuggingFace, scikit-learn, LlamaIndex, SciPy, PyMC
Web: React, FastAPI, Astro, Flask, Tailwind CSS, PostgreSQL, MongoDB, 11ty, Jekyll
Tools: LaTeX, Typst