My (Chiffon) Nguyen

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RESEARCH INTERESTS

NLP and HCI for human-compatible knowledgeable, trustworthy, and cooperative AI. My interests span 1) **human-AI alignment** focusing on data curation, scalable oversight, machine unlearning, and 2) **cooperative AI** and human-AI synergy, and 3) **multilingual and cross-cultural adaptation**

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 (A), AI Ethics, Bayesian Modeling (A), Statistical Modeling and Causal Inference (A), Optimization Methods (A), Probability and Statistics (A-), Software Engineering
- Self-study & Certifications: AI Alignment (Bluedot Impact, 2025), Natural Language Specialization (deeplearning.ai, 2024), Machine Learning Specialization (deeplearning.ai, 2022)

RESEARCH EXPERIENCE

Capstone: AI-assisted Mnemonic Generation for Vocabulary Acquisition   Oct 2024 — Mar 2025
Minerva University (Advisor: Professor Patrick Watson)   *San Francisco, CA, USA*

- Conducted **literature review** across linguistics, psycholinguistics, language learning, and machine learning to design AI system for automated mnemonic generation, synthesizing 50+ research papers
- Applied **chain-of-thought distillation pipeline**: generated 10k synthetic reasoning examples from teacher model DeepSeekR1, fine-tuned student model Gemma3-1b using LoRA via trl and unsloth libraries
- Implemented **Direct Preference Optimization** on 500 annotated preference pairs, achieving statistically significant improvements in alignment with learner judgments on cognitive science principles such as memorability and imageability

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 dataset reliability and claimed effect sizes of the said tax policy in published work

TEACHING EXPERIENCE

Minerva University

Lead Tutor, PR51 Programming with Python   Spring 2025

- Taught weekly labs for 40+ first-year students of diverse learning backgrounds, covering computer systems, Python fundamentals, object-oriented programming, debugging, security, and data structures
- Extracted 20 data-driven pedagogical insights using Google Drive API, Google Sheet trackers, student and tutor surveys, improving hands-on learning and student engagement for the next class iteration

Lead Teaching Assistant, FA50/FA51 Critical, Statistical and Algorithmic Thinking   Fall 2023 - Spring 2024

- Guided 150+ students annually in formal logic, probability and statistics, algorithmic thinking, and simulation, through office hours, personalized feedback on 25 quizzes; assisted professors in grading 6 assignments annually.

COMMUNITY ENGAGEMENT & SERVICES

- Jul 2025 - Present: **Communication and Design Engineer** at SEACrowd (AI research for Southeast Asia), building website and managing crowdsourced data annotation for underrepresented languages
- Jul 2025 - Present: Volunteer at CommonCrawl, supporting large-scale web language identification and annotation

Selected Projects

Astro Scholar Theme (github.com/mychiffonn/website)   Aug 2025 — Present
- Developed a high-performance academic theme, enabling fast, accessible, and multilingual publishing of publications and technical blogs while ensuring top-tier SEO (80+) and Lighthouse (100) scores using Astro, TailwindCSS and shadcn/ui

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 Languages:** Python, TypeScript, R, SQL, Bash
- **Machine Learning & Statistics:** PyTorch, HuggingFace, unsloth, scikit-learn, LlamaIndex, SciPy, PyMC
- **Web:** React, Astro, Express, FastAPI, PostgreSQL, Flask, Jekyll, Tailwind CSS, shadcn/ui
- **Tools & Technologies:** Git, Docker, LaTeX, Zotero, Typst