Will Wolf

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About Me

Applied ML researcher and systems engineer with 12 years' experience bringing research to production. At ASAPP, I developed novel NLP methods in close collaboration with leading academics and translated them into low-latency services for global enterprise customers. At Gauntlet, I build systems in multi-agent, security-focused, adversarial settings, including Aera—a blockchain-based asset management platform with over $150M in user funds—as well as frameworks for simulation-based risk management in volatile markets. I bring deep applied research expertise combined with hard-won engineering practice across a broad technical stack, with a proven track record of leading cross-functional pods in complex, ambiguous environments.

I actively research systems and algorithms for sequential decision-making under imperfect information. My recent work includes *Monopoly Deal: A Benchmark Environment for Bounded One-Sided Response Games* (arXiv), *Reinforcement Learning for Monopoly Deal* (blog post), an interactive demo for this work and associated codebase.

Seeking

Tech lead roles at the intersection of machine learning research and systems engineering. Interests include robotics, LLM agents, reinforcement learning, and other decision-making systems—in both industrial research labs and applied domains such as manufacturing, construction, logistics, finance, and defense.

Education

Schreyer Honors College, Penn State University 2007 – 2011

- B.S. Industrial Engineering, Minor in Mathematics
- GPA: 3.57/4.0, Dean's List 6 semesters
- Thesis: *Prisoner's Dilemma Games on a Geodesic Dome*

Experience

Senior ML Engineer, Gauntlet Jan 2023 – Present

- Core contributor to Aera, Gauntlet's on-chain asset management platform with over $150M in user funds, including our flagship stablecoin yield vault Gauntlet USD Alpha, earning 12% yield on $75M
- Own multiple simultaneous external partner vault deployments—leading pods of 3–4 engineers and PMs, defining roadmaps, and ensuring on-time delivery for high-value client launches
- Led design and development of asset management SDKs, core pricing services, our vault deployment and admin platform, and key developer tooling across Python, TypeScript, and Rust codebases—enabling rapid strategy development for researchers on three internal teams, and secure vault operations for hundreds of retail users
- Directed a two-quarter initiative to design and deliver a simulation-based risk-management system for leveraged DeFi strategies in volatile, adversarial markets—leading a small cross-functional team
- Serve as a cultural and technical leader: onboarded 10 engineers onto Aera workstreams and tech stacks, mentor team members, align stakeholders on shared tooling, and set engineering and LLM-coding best practices

Staff ML Engineer and Research Engineer, Cred Protocol and Block Science Dec 2021 – Dec 2022

- Parallel (contract) roles at the intersection of machine learning and mechanism design
- *Block Science*: Designed compensation mechanism for a hedge fund built on crowd-sourced investment signals; designed token pricing mechanism for decentralized compute network; helped create team's engineering culture
- *Cred Protocol*: Built DeFi credit scoring models for millions of on-chain wallets; authored company whitepaper; set team standards for engineering best practices and mentored junior engineers

Staff ML Engineer, ASAPP Aug 2017 – Dec 2021

- Evenly split tenure between ASAPP's Research team and ML Engineering team, working closely with Dr. Kilian Q. Weinberger on diverse NLP methods and applications: dialog generation, dialog segmentation, procedure

induction in goal-oriented dialog, personalized text recommendation, and conversation summarization

- Led design and production deployment of personalized text-recommendation system (first-author patent), balancing model quality with sub-100 ms latency to assist customer-service agents at Verizon, Vodafone, JetBlue, and Dish—resulting in faster, more relevant responses and improved agent efficiency
- Trained diverse neural language models, VAEs and β-VAE variants, auto-encoders, few-shot Prototypical classifiers, and Siamese networks in PyTorch for both production systems and multiple research initiatives
- Collaborated on design and led production deployment of conversation-summarization system, enabling faster agent handoffs and measurably improving customer experience
- Mentored junior engineers, managed timelines for critical deliverables, and collaborated across research, engineering, data science, and product teams to deliver high-impact, customer-facing systems

Early Career Roles Aug 2014 – Dec 2017

- Data Scientist, *ShopKeep*; Data Science Educator, *Thinkful*; Data Scientist, *Data-Pop Alliance*

Recent Explorations

- *Monopoly Deal: A Benchmark Environment for Bounded One-Sided Response Games*—single-author paper
- *Reinforcement Learning for Monopoly Deal*—exploring policy-gradients methods (REINFORCE, PPO, GAE)
- *Monopoly Deal vs. AI*—play against CFR and RL opponents
- *Planning with Large Language Models for Code Generation*—reproducing the original paper's results
- *Our Future with LLMs*—exploring key questions of data, learning, economics, and power

Writing & Code

- **Writing:** willwolf.io/machine-learning
- **Code:** github.com/cavaunpeu

Personal

- **Languages:** English (native), Spanish (advanced), French (advanced), Russian (intermediate)
- **Poker:** Built $50 into $150K playing 6–8 tables simultaneously
- **Travel:** willtravellife.com—75 countries and a 7,500 km bicycle ride from Turkey to Kyrgyzstan