Alperen Konukbay

Stanford University | B.S. Computer Science | Class of 2028
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Experience

WeWALK Jun. 2025 – Aug. 2025
Software Engineering Intern (Full-time) *Remote*

- Developed hybrid AI assistant projected to reduce operator workload by **80%** and costs by **50%**, by routing 85%+ of queries to on-device Gemma with selective cloud fallback for complex visual tasks.
- Built real-time safety pipeline achieving **99%+** obstacle detection at 60fps, by fusing LiDAR, YOLO, and ARKit with adaptive alert filtering.
- Delivered production-ready prototype currently in field trials with blind users, earning return offer to lead deployment based on <3s response times and reliable audio/haptic guidance.

Aplazo Jul. 2025 – Sep. 2025 (ongoing)
Machine Learning Intern (Part-time) *Remote*

- Designed & implemented Aplazo's first two-tower product recommender targeting **15% GMV** uplift (A/B test Sep 2025), using contrastive learning with sampled negatives—building foundation for CRM campaigns.
- Created Aplazo's first automated product catalog system from zero to **1,000+** merchants monthly, using LLM-powered crawlers (BeautifulSoup/Playwright) feeding normalized BigQuery warehouse for production use.

Education

Stanford University Palo Alto, CA
Bachelor of Science in Computer Science, Minor in Mathematics; GPA: 3.72 *Sep. 2024 – Jun. 2028*

Relevant Coursework: CS106B Programming Abstractions, CS109 Probability, CS197 Independent Research, Math 51 Linear Algebra, Econ 1 Principles of Economics
Awards: YC AI Startup School '25 (invite-only, 2,500 selected globally), IMEC Math Olympiad **World #1** '22

Projects & Research

LLM4Finance | *Research Assistant, Stanford MS&E* Mar. 2025 – Jun. 2025

- Implemented distributed training algorithms for financial LLMs under Prof. Kay Giesecke, achieving **2.6×** speedup with **55%** accuracy improvement on mathematical reasoning, by adapting VERL DAPO and benchmarking 168 LoRA configurations on Stanford HPC.
- Reduced model convergence time from non-converging to **23 hours** while processing 427 samples/hr, enabling cost-effective deployment of open-source financial analysis tools through BF16 optimization and asynchronous training.

Bayesian Stock Valuation & Trading System | *Python, NumPy, SciPy* Jan. 2025 – March. 2025

- Built Bayesian trading system for Google stock achieving **52.66%** return vs 40.62% buy-and-hold, using fat-tailed distributions and regime detection.
- Reduced portfolio risk by **46%** (max drawdown 15.22% vs 28.26%) through Monte Carlo-based volatility updates and adaptive position sizing.

SignPhabet | *Founder & Lead Developer* Sep. 2022 – Present

- Founded patent-pending app translating text to sign language & images for hearing-impaired children; established initial deployment partnerships with Stanford GSE and Turkish Ministry of Education.
- Selected by Schmidt Futures & Rhodes Trust as Rise Global Winner (<0.7% acceptance rate)—awarded Stanford full ride plus postgrad support, invited to Oxford summit at Rhodes House, and lifetime venture funding from Eric Schmidt's philanthropic initiative.

Technical Skills

Languages: Python, C++, Swift, Java, JavaScript, R
ML/Systems: PyTorch, TensorFlow, Distributed Training (Multi-GPU HPC), LLM Fine-tuning (LoRA), Computer Vision (YOLO)
Production: iOS (ARKit, Core ML), GCP (BigQuery), LangChain, Git