
Constantin Ertel

Data Science | Machine Learning | Deep Learning

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PROFESSIONAL SUMMARY

Master of Analytics candidate at UC Berkeley (College of Engineering) with hands-on experience building and deploying production ML systems, including transformers, vision-language pipelines, and agentic LLM systems. Combines deep technical foundations with two years of cross-functional client relationship management at Wells Fargo, and a track record of owning problems end-to-end.

EDUCATION

University of California, Berkeley | College of Engineering

Expected May 2026

Master of Analytics

GPA: 3.95

Academic Leadership: Excellence Scholarship Recipient; Student Ambassador

Teaching: Reader for IEOR 142A (Machine Learning): providing technical guidance on ML deployment and evaluation.

Coursework: Optimization; Python for Analytics; Database Design; Supply Chain; Transportation Analytics; Machine Learning

University of California, Berkeley

May 2023

B.A. in Economics, Minor in Data Science

GPA: 3.77

TECHNICAL SKILLS

- **Deep Learning & ML:** PyTorch, Transformers, XGBoost, Scikit-learn, Pandas, NumPy, Diffusion Models,
- **MLOps & Infrastructure:** Docker, MLflow, PostgreSQL, ETL Pipelines, GCP, Databricks, Rest APIs, Github
- **Application & Tools:** RAG, Agentic Architectures, LLM APIs, Streamlit, Tableau, SQL

PROFESSIONAL EXPERIENCE

Wells Fargo – Technology Banking Group

San Francisco, CA

Associate, Middle Market and Mid-Corporate Commercial Banking

Jul 2023 – Jul 2025

- Led underwriting for 35+ technology clients (market caps up to \$83B) by analyzing financials, tracking business KPIs, and researching industry economics.
- Constructed comprehensive financial models (DCF, LBO, operating models) and forecasted cash flows to assess repayment capacity, supporting the structuring and approval of new credit facilities up to \$700M.
- Rated *Exceeds Expectations* (top 10%) in 2023 and 2024 for proactively enhancing team efficiency by developing portfolio management tools, delivering quarterly market updates, and standardizing annual review procedures.

PROJECTS

Decoder-Only Transformer Language Model

Berkeley, CA

Project

Mar 2026

- Implemented a GPT-style decoder transformer from scratch in PyTorch, multi-head causal self-attention with explicit causal masking, sinusoidal positional encodings, pre-norm residual blocks, and weight-tied token embeddings across a custom 2,000-token BPE vocabulary trained on 43M tokens.
- Trained three model configurations (small/base/large) with AdamW, linear warmup plus cosine decay scheduling, and gradient norm clipping; base model (917K parameters) achieved validation perplexity of 79.5 in 27 minutes on Apple MPS.
- Built autoregressive inference pipeline with temperature scaling, top-k, and nucleus (top-p) sampling.

Multimodal Style Personalization for Image Editing

Berkeley, CA

Project

Mar 2026

- Built a multimodal personalization pipeline on MIT-Adobe FiveK using 400 training images across 2 styles to learn distinct editing behaviors from historical human outputs (<https://photo-styling.streamlit.app/>).
- Compressed 50 edited examples per style into reusable style representations with BLIP-2 + LLM summarization, enabling automatic style discovery instead of manual rules or presets.
- Trained photographer-specific LoRA adapters over 500 steps per style using parameter-efficient fine-tuning; diagnosed and resolved conditioning instability in the initial architecture to achieve consistent style transfer on held-out test images.

Fincast (AI Valuation Platform)

San Francisco, CA

Creator

Mar 2024 - Present

- Architected an autonomous LLM system utilizing an agentic RAG pipeline to synthesize market data and generate real-time financial forecasts and DCF models ([Fincast-Agent.vercel.app](#)).
- Developed an interactive portfolio tool that evaluates risk-adjusted returns through Sharpe Ratios and asset correlations to optimize multi-asset construction.
- Integrated automated data validation within the analytical workflow to mitigate hallucinations and ensure the accuracy of financial valuations.