

SIMEET NAYAN

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EXPERIENCE

Software Engineer, Wells Fargo

August, 2024 - Present

Applied Machine Learning, Backend

- **Product Recommendation(Everyday Banking):** Worked on **model training and feature pipelines** ranking products for 32M+ customers to support a **~10% average take-up increase across FY 2025-26**. Contributed to a **real-time FastAPI service** in Docker leveraging Kafka and Redis for feature streaming to bypass batch-job bottlenecks, **maintaining 80-100 ms typical latency (p99 < 200 ms)**. Tech: Python, pandas, scikit-learn, FastAPI, Kafka, Redis, PostgreSQL, Docker.
- **Fraud Detection Platform (Transactions):** Worked on **feature extraction and scoring pipelines** for payment velocity, amount, and payee history to score transfers before clearance. Contributed to containerized FastAPI scoring workflows **operating under 200 ms** that complemented rule-based systems, helping raise confirmed-fraud catch by **~12% in FY 2024-25** while keeping false-positive rates flat. Tech: Python, pandas, scikit-learn, FastAPI, Kafka, Redis, Docker

Consistently achieved the top-tier '**Exceeds Expectations**' rating across both 2025 mid-year and year-end performance cycles, placing in the top performance bracket for engineering excellence and impactful delivery at Wells Fargo.

Summer Intern, Wells Fargo

May, 2023 - July, 2023

Developed a deep learning model for mortgage prepayment risk prediction, improving accuracy and achieving 10× faster response time, while authoring comprehensive test cases for robust API deployment.

EDUCATION

Indian Institute of Engineering Science and Technology, Shibpur

2020-2024

- B. Tech. in Information Technology, CGPA : 9.33/10
- Relevant Courses: Data Structures, Algorithms, Machine Learning, Deep Learning, Operating Systems, Databases, Probability & Statistics, Computer Networks

PERSONAL PROJECTS / OPEN SOURCE CONTRIBUTIONS

- **VectorSwift** [\[Github\]](#): Vector database in Swift. Exact nearest-neighbor search (L2, inner product, cosine), WAL-backed durability, sealed segments. Currently under active development
- **ODSE: Open Data Science Environment** [\[Github\]](#): Persistent, sandboxed RL environment where agents write Python to explore data, train models, and submit predictions on a hidden test set. OpenEnv-compatible; live on Hugging Face.
- **Training a Deep-Q Network for Breakout** [\[Github\]](#): PyTorch implementation of Mnih et al. Trained a DQN agent on Atari Breakout April, 2025
- **Implementation of HyperGAN in Pytorch** [\[Github\]](#): Implementation of Ratzlaff et al. with an ensemble of LeNets. CIFAR-10 test accuracy is about 0.60 vs about 0.55 for a single LeNet. July, 2024
- **Ray(Anyscale)** [\[PRs\]](#): Contributions to Ray, a framework for scaling distributed machine learning workloads.
- **PyTorch-Ignite** [\[PRs\]](#): Optimized metric handling and CI stability

SKILLS

- Languages: Python, C++, Java, Swift, SQL, Javascript
- ML: PyTorch, scikit-learn, NumPy, pandas, Reinforcement Learning
- Serving and tools: FastAPI, Kafka, Redis, PostgreSQL, Docker, Git, Linux, CI/CD

ARTICLES

Publications

- [MRI Insights](#): Classification of Brain Tumor Using Intelligent Feature Extraction Techniques IEEE, January, 2025

Blogs:

- Training an Agent to Play Breakout using Deep Reinforcement Learning [\[medium.com\]](#) April, 2025
- Deriving Naive Bayes' From Scratch [\[medium.com\]](#) July, 2021