Hamid Rezaee

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EDUCATION

Cornell University   Ithaca, NY, USA
Bachelor's, Information Science   *Expected May 2026*
- Relevant Coursework: Object-Oriented Programming & DSA (Java), Programming with Python, Reinforcement Learning, Backend Development, Machine Learning for Business, Discrete Structures, Statistical Analysis, Advanced NLP, Advanced Information Retrieval, Machine Learning Independent Research, Technical Project Management

EXPERIENCES

Pequity   Ithaca, NY, USA
Machine Learning Engineering Intern   *August 2024 – Present*
- Built Scout, an interactive IR application using Node.js and React.js for retrieving and matching job titles to skills
- Accelerated an API-based data retrieval process by 3.6 times through multi-threaded implementation in Python
- Implemented agentic compensation pipeline, cutting down research delay from 12 minutes/employee to 20 seconds
- Executed semantic clustering using Hugging Face's ModernBERT for memory efficiency and clustering accuracy

Dalus, Inc. (YC W25)   San Francisco, CA, USA
Software Engineering Intern (AI/ML Engineering)   *June 2025 – August 2025*
- Built custom LSA retrieval engine replacing Gemini 2.5 Flash, saving $24k annually and reducing latency 10s → 50ms
- Architected schema-agnostic JSON Patch system for AI agent modifications, eliminating runtime errors in production
- Deployed GPU-powered document processing on NVIDIA T4, cutting latency 20s → 70ms and saving $9K annually
- Engineered dynamic context management for AI copilot, solving overflow issues to enable stateful conversation

Cornell Tech   New York City, NY, USA
Deep Learning Engineering Intern   *May 2024 – May 2025*
- Developed a loss function for small lesion segmentation using PyTorch and trained a model on NVIDIA 2xA6000 GPUs
- Beat the 81% benchmark by achieving an 83% mean accuracy score on validation split of the small lesion dataset
- Trained SliceSense for predicting MRI slice thickness using PyTorch with ResNet-BiLSTM-Attention architecture
- Delivered 96.5% accuracy on slice thickness prediction for MRI and abdominal imaging over 6 thickness classes

Cornell University Sustainable Design   Ithaca, NY, USA
Machine Learning Engineering Lead   *August 2023 – August 2024*
- Led a group of five students to develop a model predicting HVAC components and leading to energy efficiency
- Trained XGBoost and LightGBM models and optimized it for inference with successful backend integration using Flask
- Execute rigorous feature engineering leading to 18% model dimensionality reduction and inference acceleration
- Managed cross-team development efforts with the backend team by organizing and leading weekly meetings

PROJECTS

ReSearch   Ithaca, NY, USA
Lead Developer and Project Manager   *February 2025 – April 2025*
- Led a team of four junior developers and programmed the full-stack application using JavaScript D3, Flask, and Python
- Developed SVD-based retrieval and elegant interactive visual design for frontend to enhance user interaction quality

SliceSense   Ithaca, NY, USA
Deep Learning Researcher   *March 2025 - April 2025*
- Trained and optimized ResNet-BiLSTM using PyTorch and Torchvisions's ResNet-18 for training and inference efficiency
- Achieved a 96% post-TTA test-set accuracy on abdominal data and a 97% raw test-set accuracy on MRI data

Alignment Arena   Ithaca, NY, USA
Machine Learning Researcher   *January 2025 - April 2025*
- Utilized Mixtral-8x7B and Hugging Face Transformers to run inference on NVIDIA A100 GPU and generate synthetic data
- Performed bias quantification over five Hugging Face masked language models using HF's Transformers and PyTorch

SKILLS

Programming Language: Python, JavaScript, TypeScript, R, SQL, Java
Platforms and Libraries: PyTorch, TensorFlow, JAX, Scikit-learn, LightGBM, XGBoost, Transformers, Hugging Face, LangChain, AWS Bedrock, SageMaker, CloudFormation, Lambda, S3, EC2, ECS, Node.js, React.js, Next.js, D3.js, Tailwind, Git, Docker, Vercel, CUDA, RAG, LSTM, K-Means, Advanced NLP, Large Language Models (LLMs)