

Sam Khoshnevis

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Work Experience

- AI/ML Intern in Design Automation** - *Altera*; Toronto, Canada *May 2026 – Present*
- Prototyping AI/ML applications, such as LLMs and RAG, to automate and optimize semiconductor design workflows.
 - Collaborating with Design Automation engineers to identify opportunities for enhancing chip designer productivity.
 - Building models and tools that bridge machine learning methods with high-impact engineering environments.
- Machine Learning Engineer** - *EarthDaily Analytics*; Vancouver, Canada *May 2025 – Dec 2025*
- Developed a nationwide tree crown regression U-Net model for EarthDaily's proprietary satellite fleet
 - Outperformed SCANFI, Natural Resources Canada's baseline, improving wildfire behavior modelling inputs
 - Used Pytorch, Docker, AWS Batch & SageMaker to run high-throughput ingestion, training and inference pipelines
 - Wrote PyTest-based CI/CD tests for data ingestion, preprocessing, model training, and inference
 - Collaborated in Agile workflows, joining stand-ups, sprints, reviews, and retrospectives
- Software Engineer** - *BrightChamps*; Ho Chi Minh City, Vietnam *June 2024 - August 2024*
- Engineered and deployed a full-stack [Zoom call analyzer](#) using React and Flask to streamline the analysis of 1,000+ tutoring sessions
 - Quantified tutor encouragement with sentiment analysis and NLP, generated session summaries with GPT-3.5, and built a curse word detection module to enhance compliance and student safety
- Software Engineer** - *VR Square*; Vancouver, Canada *July 2022 - August 2022*
- Designed and developed a Python application using NumPy and Trimesh to analyze 3D CAD models for manufacturing workflows and support the development of Meshmatic
 - Creating mesh repair processes, including hole-filling and normal correction, ensuring watertight, accurate outputs

Education

- University of British Columbia** - *B.Sc. Computer Science 3rd Year*; Vancouver, Canada *Est. Spring 2028*
- 3.95/4 GPA
 - Quesal AI LLM research engineer under Dr. M. Oveisi

Personal Projects [View GitHub](#)

- Derm AI** | *Python, TensorFlow*
- Led a 3-member team to develop an AI-driven dermatology assistant using CNNs and GPT-3.5 for real-time conversational and image-based skin condition analysis
 - Improved test accuracy by 20% through data augmentation, hyperparameter optimization and GPU acceleration
 - Dockerized and deployed an API on AWS ECS with ECR, leveraging S3 and ALB for model storage and scalability
- Wiki Transformer** | *Python, PyTorch, Hugging Face, tiktoken*
- Trained a 150M parameter LLM on Wikipedia using PyTorch
 - Implemented advanced optimizations like gradient accumulation, learning rate scheduling, mixed precision, and checkpointing

Extracurriculars

- President** - *UBC Effective Altruism*; Vancouver, Canada *2023 – Present*
- Mentored 30+ students on the best ways to make a positive impact on the world
 - Awarded and managed \$20,000+ in grant funding as an Open Philanthropy Fellow

Technical Skills

Python, C/C++, JavaScript, PyTorch, TensorFlow, Scikit-learn, LLMs, RAG, LangChain, Git, Docker, AWS