## Nikita Sutskever

# Senior Al Engineer | Machine Learning Architect | Al Researcher

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## Professional Summary

Innovative and impact-driven **Senior Al Engineer** with over **12 years** of experience building, scaling, and deploying Al/ML systems across **FAANG companies** (**Facebook, Apple, Amazon, Netflix, Google**) and high-impact startups. Expert in machine learning architecture, LLMs, computer vision, NLP, reinforcement learning, and MLOps. Proven track record solving global-scale problems—from fraud detection and autonomous systems to climate Al and personalized healthcare.

# **X** Core Competencies

- Al/ML: Deep Learning, LLMs, Transformers, GANs, CNNs, RL, GNNs
- Languages & Frameworks: Python, PyTorch, TensorFlow, JAX, Scala, Go
- Cloud & Infra: AWS, GCP, Azure, Kubernetes, Airflow, MLflow, Ray
- Data: SQL, Spark, Snowflake, Pandas, NumPy, Apache Kafka
- Tooling: Docker, GitOps, CI/CD, HuggingFace, DVC, LangChain
- **Research:** Paper writing, benchmarking, model optimization (quantization, pruning), graph-based Al

# Work Experience

#### Google DeepMind - Mountain View, CA

#### Senior Al Research Engineer | Mar 2022 – Present

- Led development of **AlphaCarbon**, a generative model for protein folding with faster inference than AlphaFold.
- Created knowledge-aware LLMs for scientific QA over 20M+ PubMed articles.
- Built scalable distributed training infrastructure with 4x speedup on TPUv4 pods.

#### Meta (Facebook Al Research - FAIR) - Menlo Park, CA

#### Staff Al Engineer | Oct 2018 - Feb 2022

- Architected RealTimeDet, Meta's production object detection system for Reels and Marketplace.
- Reduced model latency by 60% using quantized vision transformers on mobile devices.
- Co-authored Meta's fairness-aware recommendation engine for 3B users.

#### Amazon Web Services (AWS AI Labs) - Seattle, WA

#### Senior Applied Scientist | May 2015 - Sep 2018

- Designed and deployed anomaly detection models for AWS Shield (DDoS protection).
- Built AutoML pipeline powering over 500 enterprise ML workloads.
- Led AWS Sagemaker's distributed training integration with Horovod + EFA.

#### Netflix - Los Gatos, CA

#### Machine Learning Engineer II | Jul 2013 – Apr 2015

- Optimized personalization algorithms for dynamic thumbnails and content ranking.
- Developed adaptive bit-rate prediction models for 200M+ global users.

#### Apple - Cupertino, CA

#### Al/ML Intern, Siri Team | Summer 2012

• Built a voice intent classifier improving Siri's accuracy on African English accents by 35%.

## Flagship Projects

## ClimateNet (2021 – Present)

- Co-founded open-source AI project to predict extreme climate events.
- Uses satellite imagery + temporal transformers to model hurricane trajectories.
- Deployed to African climate agencies for early flood warnings.

#### LLMGuard

- Built a security layer for enterprise LLMs to detect prompt injection, hallucination risks, and leakage.
- Adopted by 20+ enterprise clients and integrated into LangChain plugins.

### MediVision Al

- Deep learning system for retinal disease detection using fundus images.
- Deployed in 15 rural hospitals across India and East Africa.

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- Contextual moderation and real-time toxicity filtering for chatbots and generative Al apps.
- Hugging Face model with 10M+ downloads.

## **Education**

**Stanford University** – M.S. in Artificial Intelligence (2011 – 2013)

- Advisor: Prof. Fei-Fei Li | Focus: Vision + Language models
- Thesis: Neural Scene Graphs for Multimodal Reasoning

**Egerton University, Kenya** – B.Sc. in Computer Science (2007 – 2011)

Valedictorian | ACM ICPC Finalist | Founded AI Student Club

# 🏆 Awards & Recognition

- Google Al Impact Challenge Finalist 2023
- Pest Paper, NeurIPS Workshop on AI for Climate 2022
- Meta Al Top Innovator Award 2021
- Stanford AI Fellowship Recipient 2012

# ■ Talks & Publications

- Towards Safer Large Language Models for Enterprise Use" ACL 2024
- \$\int\text{"Engineering AI for the Planet"} TEDx Nairobi 2023
- | "Scalable Transformers for Video Understanding" CVPR 2021
- Speaker at Google Next, re:Invent, NeurIPS Expo, and PyData Global

# Open Source Contributions

- Maintainer mlops-cookbook (35K+ stars)
- 🔖 Contributor HuggingFace Transformers, DeepSpeed, LangChain
- Author "Al Engineering from First Principles" (O'Reilly, 2025 release)

## Professional Affiliations

- Member Association for Computing Machinery (ACM)
- Member IEEE Computational Intelligence Society
- Contributor OpenAl Safety Community

# References

Available upon request or at www.nikitasutskever-ai.com