

Tianchang Liu

Senior Senior Machine Learning Engineer

SUMMARY

Senior Machine Learning Engineer with a decade of experience, excelling in AI/ML systems, MLOps, and infrastructure scalability. Proven capability in deploying models on edge devices, creating efficient cloud pipelines, and ensuring production-readiness with advanced monitoring solutions. Technical adeptness spans across Python, C++, and cloud platforms (AWS, GCP, Azure), with hands-on expertise in frameworks like PyTorch, TensorFlow, ONNX, and Kubernetes for model deployment and orchestration. Holds a solid educational background with a Master's in Mathematics and Computer Science from USC and a Bachelor's in Computer Science from Tsinghua University. Demonstrates a strong record of achievements in optimizing computer vision models for retail, designing decentralized ML infrastructure, implementing scalable AI pipelines, ensuring system reliability, and advancing sales analytics & forecasting methodologies.

TECHNICAL SKILLS

Main Technical Skills	Python, MLOps, Azure VM, Snowflake
Programming Languages	Go, Java, Python, Rust, Scala, TypeScript
AI & Machine Learning	Amazon Machine learning services, Apache Mahout, AWS SageMaker, Hugging Face, LangChain, LlamaIndex, NumPy, PandasAI, Scikit-learn, TensorFlow, Xgboost, YOLOv8
C++ Frameworks	Boost
C++ Libraries and Tools	C/C++/C#
Python Frameworks	Django REST framework, FastAPI, Flask
JavaScript Frameworks	Express, Node.js, React, three.js
Go Frameworks	Gin
Go Libraries and Tools	Gin, Libp2p
Python Libraries and Tools	NumPy, Scikit-learn, TensorFlow
Java Frameworks	Spring
JavaScript Libraries and Tools	three.js
Data Analysis and Visualization Technologies	Apache Mahout, Databricks, ETL Pipelines, PandasAI



Databases & Management Systems / ORM	AWS DynamoDB, Cosmos DB, MongoDB, Neo4j, PostgreSQL, Snowflake
UI Frameworks, Libraries, and Browsers	Semantic UI
Amazon Web Services	AWS Boto3, AWS DynamoDB, AWS EC2, AWS S3, AWS SageMaker
Azure Cloud Services	Azure VM, Cosmos DB, Databricks
Deployment, CI/CD & Administration	Active Directory
Message/Queue/Task Brokers	Celery, Kafka, RabbitMQ
SDK / API and Integrations	Facebook API, FastAPI, Google API, Slack API
Mail / Network Protocols / Data transfer	GRPC
BlockChain and Decentralized Software	Hardhat, Tokio
Logging and Monitoring	Prometheus
Methodologies, Paradigms and Patterns	SOLID
UI/UX/Wireframing	STL
Virtualization, Containers and Orchestration	Terraform
Platforms	Unity
Other Technical Skills	AD, Blender 3D, InterPlanetary File System, ONNX, Open3d, OpenPyXL, Qdrant, V-ray, Weaviate

EDUCATION

- **University of Southern California**
Master of Science in Mathematics and Computer Science
Aug 2012 – May 2014
- **Tsinghua University**
Bachelor of Science in Computer Science
Sep 2008 – Jun 2012

