# Samunder Singh

8741804051 | singhsamunder270@gmail.com | linkedin.com/in/samunder-singh | samthakur.vercel.app
Bengaluru, Karnataka, India

## PROFESSIONAL SUMMARY

Data Scientist with experience in computer vision, deep learning. Proficient in PyTorch, TensorFlow, CUDA, Django, FastAPI, and Flask. Deployed production ML models and built scalable AI pipelines. Open-source contributor with 80+ merged PRs.

## EXPERIENCE

**Associate Data Scientist** — May 2024 – Present
*Lincode.ai* — *Bengaluru, India*
- Developed real-time object detection systems using YOLOv8 and DETR for visual inspection in production
- Built automated image segmentation and OCR pipelines with PaddleOCR, boosting text extraction accuracy
- Developed CLIP-based auto-labeling and anomaly detection workflows optimized for multi-GPU clusters

**Data Scientist Intern** — Jan 2022 – Apr 2022
*SmartKnower* — *Remote*
- Built Tableau dashboard for COVID-19 analytics and deployed XGBoost/SVM spam classifier (F1: 0.96) on Heroku

## OPEN SOURCE CONTRIBUTIONS

**Open Source Developer** — Aug 2024 – Present
*Keras* — *Remote*
- Contributed 6 PRs implementing NumPy functions for OpenVINO backend

**Open Source Developer** — Jun 2023 – Present
*Unify.AI* — *Remote*
- Contributed 80+ PRs to Ivy ML framework across JAX, PyTorch, TensorFlow, and PaddlePaddle backends
- Implemented non-linear activations and statistical functions enabling cross-framework code conversion

**Open Source Contributor** — Jun 2024 – May 2025
*CrossGL / CrossTL* — *Remote*
- Implemented universal shader IR for CrossGL enabling bidirectional translation between shader languages

## PROJECTS

**SLX - High-Performance Deep Learning Framework**
*Slang, PyTorch, Python, CUDA*
- Built high-performance deep learning framework on PyTorch with custom shader-based kernels using Slang
- Designed architecture enabling seamless integration of custom CUDA kernels with PyTorch operations

**Shruti-Drishti - Real-Time Indian Sign Language Recognition**
*Python, Mediapipe, TensorFlow, Flask, CNN, LSTM*
- Developed real-time ISL recognition app achieving 90%+ accuracy using CNN, LSTM, and Mediapipe Holistic
- Won award at Hasgeek hackathon for innovative ISL detection solution with Flask-based deployment

**YOLO LangChain Agent - train, validate, export yolo model with natural language**
*yolo, langchain, python*
- A powerful LangChain agent that integrates Ultralytics YOLO with OpenAI for intelligent object detection model training, validation, and deployment.

## EDUCATION

**Tezpur University** — 2020 – 2024
*Bachelor of Technology in Electrical, Electronics and Communications Engineering* — *Tezpur, Assam*

## TECHNICAL SKILLS

**Languages**: Python, C++, CUDA, SQL
**ML/DL Frameworks**: PyTorch, TensorFlow, JAX, Keras, OpenCV, PaddleOCR, YOLO, DETR, CLIP, Mediapipe
**Backend & Tools**: Django, FastAPI, Flask, MongoDB, Docker, AWS, GCP, Streamlit, Git, Tableau, Heroku
**Specializations**: Computer Vision, Deep Learning, NLP, MLOps, RAG, Self-Supervised Learning, CNN, LSTM, XGBoost, SVM