



# Jorrit van Gils

## Machine Learning Engineer

### Summary

Computer Vision and Large Language Models Engineer with five years of production experience building computer vision systems at BOX21 (2021–2024) and contributing to distributed AI on Bittensor (2024–2026). Previously researched wildlife behavior recognition from camera trap images at Wageningen University under supervision of dr. Gert Kootstra.

Continuously expanding my expertise through AI literature study and Kaggle competitions. A collaborative team player who values knowledge sharing and collective growth.

### Work Experience

2024–2026	<b>Open-Source Contributor, Bittensor</b> Developing federated learning AI training protocols at the AI-blockchain intersection
2021–2024	<b>Computer Vision Developer, BOX21</b> Developing object detection models and maintaining frontend-, backend systems
2023	<b>Fathomnet competition competitor, Kaggle</b> Detecting and classifying marine species in underwater images with Sean Nachtrab
2022	<b>Machine Learning Research Thesis, Wageningen University</b> Wildlife action recognition in camera-trap photographs using yolov5 and pose estimation
2022	<b>Satellite Image Classification Project</b> Land-use classification using AlexNet on the UCM satellite dataset with Lars ter Kate
2022	<b>Competitor iWildCam competition, Kaggle</b> Counting the number of animals in a sequence of images

### Computer skills

Languages	Python, Rust, R, Bash	Frameworks	PyTorch, TensorFlow, Keras, FastAi, Pandas, NumPy
Computer Vision	YOLOv5/8, Detectron2, OpenCV, mmdetection, DeepLabCut, SegmentAnything	Foundations	Mathematics, Linear Algebra, Statistics, AdamW, Nesterov, Cross Entropy, MSE
NLP	Transformers, Llama, TorchTitan, FinewebEdu, Tokenizers	Tools	HuggingFace, WandB, Docker, GitHub, Just, Linux, InfluxDB
Dist. Training	NCCL, FSDP, DDP, DiLoCo, LAMB, Quantization, Parallelism, AllReduce	Web Development	FastAPI, WebSockets, SQL, JavaScript, Vue.js, Nginx, RabbitMQ

### Education

2019–2022	<b>MSc Forest and Nature Conservation, Wageningen University, NL</b> Minor in Artificial Intelligence: Programming in Python, Machine Learning, Deep Learning
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### Languages

Languages	Dutch (C2), English (C2), Spanish (C1)
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