

## CV & ML Research Engineer at INSEER - Remote

- Developed and fine-tuned detection and segmentation models, 2D pose estimation, 2D-to-3D reconstruction, vision transformers, diffusion models, and preprocessing motion-capture data for training and evaluation.
- Produced POCs, implemented post-processing refinement pipelines, and solved edge cases in bounding-box tracking and pose estimation, including occlusion handling, person re-identification, ID switches, pose-jitter correction in occluded frames, and developed privacy-aware face and person blurring algorithms.
- Improved reliability of ergonomic metrics by refining skeleton alignment, joint-angle, and torque computation algorithms.
- Sparsified and benchmarked multiple YOLO, collaborated with Keymakr and Scale AI to generate human-annotated bounding boxes, resulting in a 15% mAP@0.5 improvement and ~2x in inference throughput.
- Collaborated with the CTO and CEO to create an interactive Excel Export feature of the complete platform, streamlining client data sharing and storage; helped secure a new \$5M ARR enterprise client.
- Optimized ML pipeline GPU and CPU utilization and reduced output redundancy on AWS S3, reducing inference latency and compute costs by ~\$60k allowing the pipeline to run real-time, and lowering storage expenses by ~\$3k.

### Skills

**Programming Languages and Web Technologies:** Python, Java, Go, JavaScript, R, C, SQL, Bash, C#, HTML, CSS, VueJS, ReactJS.

**Tools and Frameworks:** NLTK, Pandas, Matplotlib, Tensorflow, PyTorch, OpenCV, GIT, AWS, GCP.