

AKIRA ADENIRAN-LOWE

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RESEARCH INTERESTS

MSc. graduate in Autonomous Systems (Hons.) at DTU specializing in 3D Computer Vision. Research focuses on 3D scene understanding, with a core interest in self-supervised learning, and continual learning for dynamic environments.

EDUCATION

MSc. Autonomous Systems (Hons. Research Track)

2024 - 2026

DTU - Technical University of Denmark

Final GPA: 11.37/12

- **Thesis:** "Aligned Feature Learning for Semantic Segmentation on Partial Point Clouds" (**Grade:** 12)
- **Advisors:** Theodora Kontogianni & Lazaros Nalpantidis
- **Exchange:** KTH Royal Institute of Technology, Sweden

BSc. General Engineering (Cyber Systems)

2021 - 2024

DTU - Technical University of Denmark

Final GPA: 10.21/12

- **Thesis:** "On Antideepfake Methods for Multimodal Technologies" (**Grade:** 12)
- **Advisors:** Sneha Das & Charalampos Orfanidis
- **Exchange:** Nanyang Technological University (NTU), Singapore

PUBLICATIONS

PAGER: Partial-to-Global Alignment via Geometric and Relational Distillation [[pdf](#)]

[AMA Adeniran-Lowe](#), B Singh, LA Dethlefsen, L Nalpantidis, T Kontogianni

Under Review, 2026

Concept Drift Under Harsh Constraints: A Review of Potential Strategies for IoT Systems [[pdf](#)]

AE Øren, NK Peuker, [AMA Adeniran-Lowe](#), S Ruepp, MN Petersen

IEEE Access, 2025

EMPLOYMENT

DTU Compute Section for Visual Computing, QUAITOM Project

Programmer

Jul 25 - Present

- Developed core volumetric image processing workflows and contributed open-source modules to the qim3d Python library.
- Engineered custom tooling and interfaces to streamline high-throughput data processing on DTU's High-Performance Computing (HPC) cluster.

Falck Digital Technology A/S

Student in Data & Analytics

Dec 23 – Jul 25

- Deployed predictive ML models for ambulance demand forecasting, built Azure-based Python cost-tracking tools, and co-established departmental MLOps practices.
- Managed cross-functional data initiatives and coordinated workshops within the department.

DTU Compute Section for Embedded Systems Engineering

Student Assistant

October, 2023 – March, 2024

- Developed a LoRa synchronization system for sensor fusion between pose estimation algorithm and IMU sensor data for live kayaking analysis.

Fujifilm Diosynth Biotechnologies

Student in Project Management

Jun 22 – Nov 23

- Led the planning and execution of internal technical events and departmental workshops
- Developed automated analytics dashboards to track global IT project requirements and technical delivery timelines.

TEACHING EXPERIENCE

- **Teaching Assistant** (Jan 2025): Embedded Systems Programming
- **Teaching Assistant** (Jun 2024): Design-build 4: Autonomous devices for controlling and studying living systems
- **Teaching Assistant** (Jan 2024): Design-build 1: Devices for measuring cell growth

RESEARCH EXPERIENCE

- **Multimodal Pre-Training methods for 3D Scene Understanding** (Jan 26 - Ongoing):
KTH, Robotics Perception and Learning Lab
 - Developing a multimodal pipeline that leverages self-supervised Novel View Synthesis (NVS) as a pre-training task for point cloud understanding.
- **Aligned Feature Learning for Semantic Segmentation on Partial Point Clouds** (Dec 25 - May 26):
DTU Compute, Visual Computing Section
 - Developed Bridge3D, an adapter-based framework utilizing cross-view relational distillation to correct coordinate-frame and visibility mismatches between egocentric observations and globally pre-trained representation spaces.
- **6DOF Object Pose Estimation for Pick-and-Place with Danfoss** (Aug 25):
SDU, Elite Summer School - Robotics and Entrepreneurship
 - Developed a 6D pose estimation and grasping system for a Universal Robots arm that integrates new objects without retraining, using both stereo and monocular methods.
- **Validation of Object Detection on NVIDIA Jetson** (Feb 25 - Jun 25):
DTU Electro, Perception and Cognition for Autonomous Systems group
 - Implemented and benchmarked YOLOv8 inference performance across TensorRT and ONNX Runtimes, evaluating accuracy and speed under various quantization settings.
- **Autonomous Weed Management** (Oct 24 - Mar 25):
DTU Health Tech, MIDAS group
 - Designed an automated weed detection and thermal removal system using a precision heating element and real-time environmental monitoring.
- **Anti-Deepfake Methods for Multimodal Technologies** (Feb 24 - Jun 24):
DTU Compute, Statistics and Data Analysis Section
 - Developed a benchmarking framework for fairness and robustness in deepfake detection and measured the tradeoffs between model efficiency and model performance.

TECHNICAL SKILLS

- **Languages:** Python, C++, C, Java, F#, SQL
- **Frameworks & Libraries:** PyTorch, ROS2, OpenCV, Numpy, CUDAFI, Gradio, FastAPI, Weights and Biases, Databricks
- **Models/Architectures:** YOLO, SAM, Depth Anything, 3D Gaussian Splatting, Point Transformers
- **ML & Hardware Optimisation:** TensorRT, ONNX Runtime, Quantization, Nvidia Jetson Orin, Raspberry Pi, Intel RealSense
- **Tools & Environments:** Linux, Docker, High Performance Computing (HPC)

REFERENCES

Lazaros Nalpantidis

Group leader, Professor, DTU Elektro

Email: lanalpa@dtu.dk

Charalampos Orfanidis

Assistant Professor, DTU Compute

Email: chaorf@dtu.dk