Gustav L. K. Hansen

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LinkedIn Profile

Professional Profile

Curious, analytical, and hands-on ML/AI enthusiast with a passion for tackling complex problems, always with a positive mindset and eagerness to learn. In my mind, there is nothing quite like the **satisfaction of applying cutting-edge technology to real-world problems and seeing it make a difference**.

Experience

Mar. 2021 – Oct. 2022 **Student Data Scientist at Dansk Reklame Film**

Aug. 2018 – Sep. 2019. **Marketing Assistant at Lomax A/S**

Feb. 2016 – Oct. 2016. **Service Employee at McDonald's**

Current situation

Oct. 2022 – **Machine Learning Researcher/Engineer at Veo Technologies (Full-time since Aug. 2024)**

- Collaborated closely with researchers, engineers, and product experts to align AI-driven insights with user needs and conceptualized a state-of-the-art graph-based deep learning approach to **modeling player-specific events** directly from videos. Served as the **primary driver** in taking the project from **concept to production**, developing the approach from scratch to provide grassroots players with detailed and accurate performance statistics
- Developed and deployed a **lightweight action-tracking system** for camera control, optimized for **on-device inference**. Integrated into Veo's production pipeline, enabling real-time inference on previously unsupported hardware while maintaining high performance. To validate the implementation changes, I **led an extensive user validation study** to assess improvements and ensure customer satisfaction
- Modernized an outdated player detection pipeline achieving a **3% increase in F1-score** (from 90% to 93%) and transitioned it to PyTorch Lightning

Education

2022-2024 **MSc in Human-Centered Artificial Intelligence**

Technical University of Denmark

Coursework: Advanced Deep Learning, Bayesian Machine Learning, Cognitive Modeling, Machine Learning Operations

2023 **Exchange Semester**

École Polytechnique Fédérale de Lausanne, Switzerland

Specializing in the mathematics of machine learning algorithms and end-to-end AI product development.

2019-2022 **BSc in Data Science**

IT University of Copenhagen

Coursework: Large-Scale Data Analysis, Applied Statistics, Data Visualisation & Data-Driven Decision Making, Database Systems, Algorithms and Data Structures, Technical Communication

See page 2 for details on Academic Highlights, Personal Qualities & Technical Skills

Academic Highlights

Master Thesis (2024) **Representation Learning Techniques for Sequence Data in Football Game Dynamics**

Collaboration with Veo Technologies

Researched and applied state-of-the-art **self-supervised representation learning** methods on information-rich visualizations of spatiotemporal tracking data to extract **latent temporal gameplay representations** from newly recorded videos. Trained, optimized, and prepared the model for inference, enabling use cases such as enhancing existing AI models, auto-tagging for data generation, and similarity-based retrieval. This work **bridges AI research and real-world deployment, contributing to AI-driven football analytics**.

Bachelor Project (2022) **Using Machine Learning to Recognize Events from Spatiotemporal Soccer Data**

Collaboration with Brøndby IF (Danish Football club)

Developed an **end-to-end data processing and machine learning pipeline** that 1) synchronized event and tracking data from different data providers throughout the match, and 2) addressed the challenge of detecting and predicting events from spatiotemporal tracking data. This project marked Brøndby's first attempt at productionizing event and tracking data synchronization with the overarching objective of reducing the reliance on costly human-curated event annotations.

Personal Qualities

Growing up in a small town outside Copenhagen with my older brother, family dog, and parents, an active lifestyle was always a core part of our family—whether it was football, swimming, running, or biking. For me, football was always number one, and it remains my biggest passion, both as a player and a lifelong supporter of Arsenal and Real Madrid. As a person, I am ambitious, positive, structured, and committed, thriving in team environments-also cross-functional-where I can both learn from others and contribute my own insights. I approach challenges with curiosity and responsibility, always seeing things through to completion. Stepping out of my comfort zone is something I embrace, knowing that growth and learning come from taking on new challenges.

Technical Skills

Deep Learning & AI: Extensive experience in **deep learning** where I have worked on multiple projects using techniques from Geometric Deep Learning, Transformers, and Diffusion across modalities such as image/video, text, and spatiotemporal data. Proficient in designing, optimizing (using onnx and TensorRT), and deploying models to production in a cloud-environment.

Software Development & Tech Stack: Strong software engineering background with a focus on **efficient and scalable implementations**. Proficient in **Python** and experienced in optimizing data processing pipelines using **NumPy, Pandas, and Polars** as well as **multi-threading and parallel processing** for performance gains. Comfortable with **Git, CI/CD**, and deployment in cloud environments using **Docker, Kubernetes, and AWS**. Familiar with ML orchestration tools like **Metaflow** and **Argo**.