

## PROFILE

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A meticulous AI & Computer Vision Specialist with a Master's in Artificial Intelligence and professional expertise in deep learning, image processing, and segmentation. Proven ability to develop and optimize solutions for complex CV challenges including real-time object detection, biomedical image analysis, and remote physiological measurement. Combines strong theoretical knowledge with practical software engineering skills to deliver robust, production-ready systems.

## PROFESSIONAL EXPERIENCE

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- **Computer Vision Engineer** Rome, IT  
*Technolife* Feb. 2025 - Present
  - **Real-Time Object Detection & Tracking:** Optimized models using OpenCV for robust performance in embedded environments.
  - **Advanced Segmentation & Analysis:** Fine-tuned pre-trained CNNs for specialized tasks including fall detection and fraud detection from document images, focusing on accurate feature extraction.
  - **MLOps & Deployment:** Designed and implemented CI/CD pipelines (YAML) to automate testing, validation, and deployment of machine learning models.
- **Software Engineer** Remote  
*Teoresi Spa* Apr. 2022 - Jan. 2025
  - **Biomedical Image Processing Suite:** Built a high-performance C++/Qt application with OpenCV for processing and auto-stitching DICOM medical images, enhancing diagnostic workflows.
  - **Computer Vision Algorithms:** Developed custom algorithms for image manipulation and analysis, integrated into desktop and embedded systems with Qt5/Qt6 GUIs.
  - **Project Leadership:** Led desktop application development as SCRUM Leader, ensuring Agile methodologies were followed for on-time delivery.
- **Software Engineer Internship** Milan, IT  
*Zuru Tech* Nov. 2021 - Mar. 2022
  - **Procedural 3D Content Generation:** Developed tools for parametric generation of architectural models (BIM), involving algorithmic shape manipulation and rule-based systems.
  - **Game Engine Development:** Extended C++ Entity Component Systems within Unreal Engine 4, contributing to core engine functionality.
- **Master Thesis Internship** Utrecht, NL  
*Teoresi Spa* Mar. 2021 - Nov. 2021
  - **Remote Physiological Measurement:** Trained a CNN model to accurately estimate Heart Rate from facial video footage, a core project in telemedicine applications.
  - **Facial Analysis Package:** Developed and published **FaceManager**, a Python library for robust facial feature extraction and analysis.

## KEY PROJECTS

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- **NrPPG-NNET: Remote Heart Rate Estimation:** End-to-end deep learning system using CNNs and spatial-temporal representation for non-contact HR measurement. Demonstrates expertise in signal-from-video extraction.
- **3D Shape Retrieval System:** Multimedia retrieval system using the Qt framework. Featured custom-engineered similarity metrics for 3D shape comparison, relevant to visual similarity tasks.
- **FaceManager Python Package:** Developed a comprehensive package for facial feature extraction, demonstrating practical library creation for computer vision tasks.
- **Language Bias Visualization:** Research project utilizing word embeddings (Word2Vec, GloVe) on Reddit data to analyze and visualize semantic shift and bias over time.

## EDUCATION

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- **Utrecht University** Utrecht, NL  
*Master of Science in Artificial Intelligence* Sept. 2019 – Jul. 2021
- **London Metropolitan University** London, UK  
*Bachelor of Science (Hons) in Computer Games Programming* Sept. 2015 – Jul. 2018

## TECHNICAL SKILLS

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**Computer** OpenCV, TensorFlow, PyTorch, Keras, Image Segmentation, Object Detection/Tracking, Generative Models, Feature Extraction, NumPy, SciPy, Pandas.

**Programming** **Python** (Advanced), **C++** (Advanced), R, C#, YAML.

**Frameworks &** Qt5/Qt6 (QML), Unreal Engine 4, Unity, OpenGL.

**Libraries**

**Visualization** Matplotlib, Seaborn, Bokeh.

**Methodologies** MLOps, CI/CD Pipeline Design, Agile/SCRUM, Software Development Lifecycle.