Federico **Favia**

SENIOR COMPUTER VISION ENGINEER · ML/DL ENGINEER

Born: 04.11.1996, Mantova, Italy

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Summary

Experienced Data Scientist with a strong technical foundation in Computer Vision, Image Processing and DL/ML, especially within smart operations area. Proficient in managing projects and teams, coordinating AI/ML development team activities, and maintaining a point of contact with customers to drive activities, with robust background in team work and problem solving. Specialized in CV pipelines (on cloud as well) with deep neural networks, AI models, CNNs and algorithms for visual detection/recognition/tracking/segmentation (architectures fine-tuning) plus data collection and annotation.

Work Experience

Technology Data Reply IT - AI BU
Milan, Italy - Hybrid

SENIOR DATA SCIENTIST CONSULTANT
May 2021 - PRESENT

- Worked on optimizing processes through computer vision and AI on network cameras for important airports customers (biggest European cargo airport which lowered its CO2 footprint and ground operation times).
- Specialized in AI-driven solutions for smart operations, with deep expertise in computer vision, image processin, deep learning, and MLOps (Python, OpenCV, PyTorch, YOLOv5-v8, RTMDet, OCR, Azure ML Studio).
- Led small teams in end-to-end machine learning system development, from data collection and model training to production deployment, ensuring scalable and efficient solutions. Deployed object detection models and image processing pipelines on cloud platforms (Azure) and edge devices (NVIDIA Jetson).

ManoMotion AB
Stockholm, Sweden

COMPUTER VISION ENGINEER INTERN
Jan. - Jul. 2020

- Deep Learning research project about hand segmentation to improve real-time AR hand tracking technology.
- Implementation and evaluation of different architectures in Python, Keras and Tensorflow: reached 96.03% Dice Accuracy on proprietary dataset and 75.26% Dice on average cross-dataset, running at 23.8 FPS.

Xtensa SRL
Trento, Italy

COMPUTER VISION STUDENT INTERN
Apr. - Jul. 2018

- Developed and validated a soccer player detection and tracking system using C/C++, OpenCV, and a convolutional neural network approach, specifically YOLOv3.

Skills

CS	Proficient in Python and OpenCV. Familiar in C/C++, Matlab, R and Arduino IDE, SQL, Snowflake
AI	Proficient in PyTorch and YOLO, RTMDet Models. Familiar in Cloud Deployment, Jetson Edge Deployment, TensorFlow, Keras
MLOps	Proficient in MLOps and Azure Data Labeling, Pipelines in Azure ML Studio and Cloud Architectures, OCI Data Science
DevOps	Familiar in Docker, DL Architecture Design, K8S, AKS
Back-end	MQTT, Azure ServiceBus and Azure EventHub. Familiar in Azure Datalake and Azure Data Factory
Languages	English C1 (IELTS Band 8), Italian
Personal	Team Leading, Strong team-working and problem solving inclination, Mentoring and Training, Customer Communication
Others	Fluent in Microsoft Office and familiar with Adobe Illustrator/Photoshop

Education

KTH Royal Institute of Technology - Grade: A
Stockholm, Sweden

DOUBLE DEGREE MSc, ELECTRICAL ENGINEERING - ICT INNOVATION
2018 - 2021

- Final thesis project at company "Real-time hand segmentation using deep learning".
- Exit University of EIT Digital, Specialisation in Mobile Visual Computing: Courses in Computer Vision, Visual Data Analysis, Video Processing.

University of Trento - Grade: 110/110 with honours
Trento, Italy

DOUBLE DEGREE MSc, INFORMATION AND COMMUNICATIONS ENGINEERING - ICT INNOVATION
2018 -2021

- Entry University of EIT Digital Academy in Visual Computing Communication: courses in Pattern Recognition, Computer Graphics, Multimedia Security.
- Minor in Innovation and Entrepreneurship, School of Innovation CLAB Certificate.

University of Trento - Grade: 105/110   *Trento, Italy*

BSc in Telecommunications Engineering   *2015 - 2018*

- Final thesis "Convolutional Neural Networks' use for detection and tracking of players in sport events".
- Relevant courses in Image Processing and Transmission, Biomedical Diagnostic Techniques, Remote Sensing and ELEDIA ETRP Talented for Electromagnetic Field Simulators".

Scientific High School - Grade: 100/100   *Mantova, Italy*

LSSA "E. Fermi"   *2010 - 2015*

Projects

Winners "Hack Future of SME Banking"   *Budapest, Hungary*

Deephack EIT   *Dec 2019*

- Ultrahack & EIT FinTech Hackathon won with my team to improve OTP bank's E-biz platform.

Startup Lab Trento   *CLAB Trento, Italy*

Business Project   *Feb 2019 - May 2019*

- Business Development Laboratory: our team arrived in the finals with our IOT safety device for mountain bikers (awarded with best IoT project and best entreprenurial project of the year).

Computer Vision Academic Projects   *Stockholm and Trento*

C++, Python, OpenCV, Matlab   *2018-2020*

- Naval Traffic's Estimate in Venice, SIFT/SURF features for Image matching, Vocabulary Tree for Visual Search System, Edge Detection, Hough Transform and Object Segmentation, Image Compression.

Certificates

*	**M2L Mediterranean ML Summer School,** Milan Bicocca University	*Sep 2024*
*	**State Exam Qualification as Engineer - Informatics A,** Milan Polytechnic University	*Jan 2023*
*	**World Summit AI 2023,** Amsterdam	*Oct 2023*
*	**Microsoft: Azure AI Fundamentals AI-900,** MS Azure	*Jan 2023*
*	**IELTS Band 8 - C1 CEFR Level - General Training,** British Council	*Jul 2022*
*	**OCI Data Science and DevOps Professional, OCI Machine Learning using Au- tonomous Database and Data Management, OCI Foundations, OCI AI Founda- tions,** Oracle	*2022-2023*
*	**NVIDIA - Fundamentals of Deep Learning,** NVIDIA DLI	*Sep 2021*
*	**Innovation Certificate,** School of Innovation Trento	*Aug 2021*
*	**Huawei Seeds for the Future,** Top-10 Tech Uni talents by Huawei Italy	*Nov 2020*
*	**Helsinki EIT Summer School,** Aalto University, Disrupting Retail, Finland	*Aug 2019*

Awards

2023	**Reply Gala Awards,** Best Project Technology Innovation: "Advanced Trolley Management in Airport Ground Handling Operations"	*Turin*
2023	**Reply Xchange Speaker,** "A Computer Vision AI Powered Solution for Smart Operation Control"	*Milan*
2022	**Reply Xchange Speaker,** "Airport Intelligence: the Fraport Airfield Operations experience"	*Milan*

Volunteering

EIT Digital Student Ambassador   *EIT*

Giving counsel to future EIT prospective students   *2020-2021*