CONTACT

Italian, 28/09/1995

+39 3337196544

https://github.com/mattiabestiaccia

www.linkedin.com/in/mattia-bruscia

bruscia95@gmail.com

INTERESTS

- Artificial Intelligence & Prompt Engineering
- UAVs and Remote Sensing
- Human-Robot Interaction
- Digital Drawing

LANGUAGES

- Italian – Native
- English – B2 (professional working proficiency, currently preparing for C1)

PROMPT ENGINEER

MATTIA BRUSCIA

Master's student in Bioengineering at the University of Pisa, with a strong interdisciplinary background combining artificial intelligence, image/signal processing, and robotics. Experienced in MATLAB, Python, Arduino, and Java, applied in innovative projects from humanoid robotics to UAV image analysis. Recently expanded expertise to prompt engineering and Large Language Models (LLMs), with applications ranging from process optimization to AI-assisted coding (vibe coding) and research workflows. Skilled in the use of professional drone mission planning software (Pix4D, Agisoft Metashape) and AI platforms (OpenAI GPT, Anthropic models). Passionate about advancing the integration of AI into practical solutions across multiple domains.

SKILLS

- Prompt Engineering & LLMs — Expertise in designing, testing, and optimizing prompts for Large Language Models (LLMs) across diverse domains, including process automation, AI-assisted coding (vibe coding), and research workflows. Experienced with OpenAI, Anthropic, Hugging Face, and LangChain/LangGraph-based architectures.
- Programming & Frameworks — Proficient in Python, MATLAB, Java, and Android development. Practical experience with TensorFlow, PyTorch, TensorBoard, and scikit-learn for deep learning, model evaluation, and experiment tracking.
- Image & Signal Processing — Skilled in UAV image analysis, feature extraction with Wavelet Scattering Transform, and deep learning for computer vision and classification tasks.
- Robotics & Human-Robot Interaction (HRI) — Background in humanoid robotics, avatar-based interaction frameworks, and AI-driven control of facial expression systems.
- Automation & Tools — Experience in AI workflow automation using n8n and API-based integrations. Proficient with Pix4D, Agisoft Metashape, Fusion 360, and Tinkercad for UAV mission planning, 3D modeling, and simulation.

Willing to travel. Driving licence available.

EDUCATION

September 2021 – Present

MASTER'S DEGREE IN BIOENGINEERING

Focus on artificial intelligence, image/signal processing, and human-robot interaction.

September 2014 – 2021

BACHELOR'S DEGREE IN BIOMEDICAL ENGINEERING

Focus on artificial intelligence, image/signal processing, and human-robot interaction.

MORE EXPERIENCE

TUTOR

- Tutoring university students in engineering subjects.

LIFEGUARD

- Beach lifeguard assistant, later promoted to team leader.

WAITER

- Waiter for major events and weddings.

EXPERIENCE

RESEARCH FELLOW - UNIVERSITY OF MARYLAND CENTER FOR ENVIRONMENTAL SCIENCE (UMCES), MARYLAND, USA

February 2025 – July 2025 (with extension in progress)

- Conducted research on UAV image analysis and vegetation classification.
- Developed multiscale feature extraction methods using Wavelet Scattering Transform (WST) for classification via Random Forests.
- Resulted in the forthcoming publication: "Multiscale Feature Extraction with Wavelet Scattering for UAV Vegetation Classification via Random Forests" (under review).

RESEARCHER & INTERN - ENRICO PIAGGIO RESEARCH CENTRE, UNIVERSITY OF PISA

February 2023 – May 2024

- Worked on the humanoid robot Abel, focusing on human-robot interaction and integration of avatars and LLM-driven frameworks.
- Implemented deep learning algorithms (CNNs, inverse kinematics with regression models) for advanced facial robotics.
- Publications produced during this period:

1. "A facial imitation framework for the simultaneous face control of a virtual avatar and a humanoid robot" – explored human-robot interaction, embodiment, and social bonding via avatars.
2. "An Overview On Large Language Models Across Key Domains: A Systematic Review" – systematic review of LLM applications across healthcare, education, and industry.
3. "Advanced Control of Humanoid Facial Robotics: A Deep Learning Approach to Inverse Kinematics" – proposed a novel deep learning model for humanoid facial expression control.

AI EXPLORERS LAB – INTRODUCTION TO ARTIFICIAL INTELLIGENCE FOR KIDS – BRESSANONE (BZ)

August – September 2025

- Organized and conducted interactive workshops for elementary school children.
- Introduced concepts of Artificial Intelligence, prompting, and creative applications of LLMs in an engaging and accessible way.
- Focused on fostering curiosity and understanding of AI fundamentals at an early age.