Andrea Bedei

Nationality: Italian **Date of birth:** 21/8/01 **Gender:** Male

LinkedIn: https://www.linkedin.com/in/andrea-bedei-8a5153241/

WORK EXPERIENCE

Alma Mater Studiorum - University of Bologna – Cesena, Italy

City: Cesena | **Country:** Italy

Academic advisor

[1/9/23 – 17/7/24]

I provide academic support and guidance to university students enrolled in the Bachelor's degree program in Information Systems Technologies, assisting them with administrative procedures, study planning, and the resolution of organizational or academic issues. I act as a liaison between students and faculty, helping to improve communication and enhance the overall student experience.

Ser.In.Ar. – Cesena, Italy

City: Cesena | **Country:** Italy | **Website:** https://www.serinar.it/ | **Business or sector:** Education

Computer science teacher

[1/6/24 – Current]

I am currently involved in the *Innova-Mente* project, an initiative that promotes technological and educational innovation in local schools. As part of the project, I conduct workshops and hands-on activities in primary, middle, and high schools, introducing students to programming, robotics, and digital skills in an engaging and accessible way.
The project is carried out in collaboration with the Education and Culture Commission of the CRC Foundation and the Educational Documentation Center (CDE), under the patronage of the Department of Computer Science, Science and Engineering and the Department of Psychology of the University of Bologna, as well as the Cesena University Campus.

LOG 80 S.R.L. – Forlì, Italy

City: Forlì | **Country:** Italy | **Website:** https://www.log80.it/

software developer

[1/8/22 – 30/9/22]

Curricular internship experience carried out within the company. My main tasks included software development and bug support for applications.
My role was to develop management systems for healthcare companies, which allowed me to learn design patterns for web pages, particularly their structuring through the MVC model.

Technologies used: PHP, HTML, CSS, JS, jQuery, MySQL

NewServ Studio

Website: https://www.newserv.it/

Property developer

[1/6/19 – 31/7/19]

Work-based learning experience in a company.
Design of a Python bot for Instagram, creation of web pages for new clients, and development of functions in PHP for retrieving information from social media.

Technologies used: PHP, Python, SQL, HTML, CSS, JS

EDUCATION AND TRAINING

Master's degree in Engineering and Computer Science

Alma Mater Studiorum - University of Bologna [23/7/23 – 17/7/25]

City: Cesena | **Country:** Italy | **Website:** https://corsi.unibo.it/magistrale/IngegneriaScienzeInformatiche | **Field(s) of study:** Engineering and Computer Science | **Final grade:** 110 e Lode | **NQF Level:** EQF 7 | **Thesis:** Predictive Modeling of Tire Grip During Cornering in High-Speed Racing

Thesis carried out in collaboration with the Technology Innovation Institute (TII) in Abu Dhabi.
The thesis focuses on the development of machine learning models to estimate tire grip conditions in real time.
It is divided into two parts:

- **Simulated data (Assetto Corsa):** A labeled dataset was generated using the Assetto Corsa racing simulator. Several supervised models (CNN, LSTM, Transformer, ResNet) were tested to classify grip states (neutral, high grip, loss of grip) based on telemetry data.
- **Real vehicle data (TII – Technology Innovation Institute):** High-frequency sensor logs from a test vehicle were preprocessed, synchronized, and enriched with computed physical quantities (e.g., slip ratio, slip angle, friction coefficient μ). Rule-based logic and regression models were developed to continuously and interpretably detect and quantify the risk of understeer and oversteer.

The work combined classical vehicle dynamics with artificial intelligence techniques to support real-time grip awareness in racing scenarios.

Main technologies and tools: Python, PyTorch, NumPy, pandas, ROS2, shared memory, .mcap files, .msg/IDL message parsing, deep learning models (LSTM, CNN, Transformer, ResNet), real-time telemetry, simulation, regression and classification models, multichannel data preprocessing and synchronization, vehicle dynamics analysis, slip ratio and slip angle computation, data visualization (matplotlib, seaborn), version control with Git.

Bachelor's degree in Engineering and Computer Science

Alma Mater Studiorum - University of Bologna [20/9/20 – 20/7/23]

City: Cesena | **Country:** Italy | **Website:** https://corsi.unibo.it/laurea/IngegneriaScienzeInformatiche | **Field(s) of study:** Engineering and Computer Science | **Final grade:** 110 e Lode | **NQF Level:** EQF 6 | **Thesis:** Development of a digital ecosystem for the documentation and analysis of marine sightings using computer vision techniques

Thesis description:
This thesis presents the development of a comprehensive digital ecosystem to support the monitoring of marine species, in collaboration with the Department of Aquaculture at the University of Bologna. The system enables researchers to document and analyze sightings through a robust infrastructure that includes a backend database, a web and mobile frontend, and an image recognition module built with Python and deployed via Docker containers. The project provides researchers with a practical tool to track and study marine wildlife, with the aim of protecting biodiversity and promoting sustainable interactions with marine environments.
https://amslaurea.unibo.it/id/eprint/29165

Main technologies and tools: Python, TensorFlow/Keras, OpenCV, FastAPI, Docker, Docker Compose, RESTful API, Git, GitHub, containerization, image annotation and classification, responsive web design, mobile interface, full-stack development, local and cloud server deployment, logging and monitoring.

High school diploma

ITT Blaise Pascal [13/9/15 – 6/20]

Address: Piazzale Macrelli 100, 47521 Cesena (Italy) | **Website:** https://www.ispascalcomandini.it/ | **Field(s) of study:** Indirizzo informatico | **Final grade:** 100/100 | **Level in EQF:** EQF level 4

Studio dei linguaggi, c++, c# molto approfondito e python. In aggiunta, ho avuto l'occasione di lavorare con chip integrati come raspberry e ESP8265. Studio di linguaggi DDL e DML sulla parte di Database.

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English	**Spanish**
LISTENING B2 **READING** B2 **WRITING** B2	**LISTENING** A1 **READING** A1 **WRITING** A1
SPOKEN PRODUCTION B2 **SPOKEN INTERACTION** B2	**SPOKEN PRODUCTION** A1 **SPOKEN INTERACTION** A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user