# Ana Sopa

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## EDUCATION

#### SAPIENZA UNIVERSITÀ DI ROMA

Bachelor's degree in Statistics, Economics, Finance, and Insurance

*Core courses:* Basic Statistics, Informatics, Linear Algebra, Calculus (1, 2, & 3), Financial Mathematics, Probability, Databases, Statistical Inference, Actuarial Mathematics, Multivariable Statistics, Stochastic Processes, Models of Financial Markets, Risk Theory, Economics I & II, Business Economics

Activities and societies: TEDxSapienzaU Marketing Team Member and Sapienza School of Advanced Studies scholar. Medical Statistics Course Certificate, TERASTAT 2 Supercomputing Workshop, Career Management Skills Open Badge (in progress), Event Management Open Bagde (in progress).

#### SCHOOL OF ADVANCED STUDIES SAPIENZA

Honor's program, Academic class of Legal, Political, Economic, and Social Sciences

Earned a place in the Sapienza School of Advanced Studies, a rigorous academic program for excellent students that complemented my main course of study. Each year this included participating in an interdisciplinary course, two specialized seminars per academic class, advanced foreign language training, and a comprehensive research project under expert guidance. Out of approximately 18,000 new students enrolled each year, only a small number are invited to apply, and ultimately, only 20 students are admitted annually based on exceptional academic achievements.

Interdisciplinary Course (2021) – Macro Topic: Cities, Specialized Topic: Cyber Cities – Grade: 30/30 Interdisciplinary Course (2022) – Macro Topic: Food, Specialized Topic: Sustainability English Language Course – C1 Advanced Argumentative Italian – Grade: 30 with honours/30 Introduction to Python Programming Course & Project – Grade: 30 with honors/30 Research and Analysis Project: "The Role of Confounders in Data Acquisition and Simpson's Paradox" (2022) – Grade: 28/30

#### LICEO STATALE "MARIA MONTESSORI"

ROME, ITALY 2017 - 2020

ROME, ITALY

November 2020 - March 2022

Scientific High School (Liceo Scientifico)

Attended a scientifically oriented high school, where I quickly adapted to the Italian school system after learning Italian in just three months. I was fortunate to be the top student in my class and took part in a variety of extracurricular activities, including math Olympiads, neuroscience laboratories, and tutoring fellow students in both Math and English. I also had the opportunity to represent my school in the "Leonardo da Vinci 4.0" project in collaboration with the Museo Nazionale della Scienza e della Tecnologia Leonardo da Vinci, where I worked on implementing augmented reality to bring Leonardo's inventions to life through immersive technology.

ROME, ITALY Expected graduation: *May 2025* 

#### EXPERIENCE SAPIENZA UNIVERSITÀ DI ROMA

Academic Tutor - Probability and Statistics

Currently supporting students in coursework and will be assisting in exams for Probability and Statistics at the Department of Computer, Automatic, and Management Engineering.

**TEDxSapienzaU** 

Marketing Team Member

- Analyzed social media metrics on platforms like Meta and Instagram to evaluate performance.
- Conducted market analysis to enhance engagement strategies and audience reach.
- Prepared KPI reports to present to sponsors and partners.
- Created and posted content for Instagram and LinkedIn to promote events and initiatives.

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Academic Tutor - Calculus

- Student tutor for the Calculus course at the Department of Computer, Automatic, and Management Engineering.
- Responsible for providing frontline support in the classroom, actively engaging with students, and assisting in exam • evaluation.

### SAPIENZA UNIVERSITÀ DI ROMA

Library Assistant

- Assisted students and faculty in accessing specialized statistical literature.
- Provided administrative support for library operations.
- Maintained organized and efficient access to academic resources.

## PROJECTS

#### User Feedback Analysis Dashboard

Analyzed and processed user feedback to enhance the usability and functionality of Mindgrasp, an AI-based learning tool.

- Translated, cleaned, and transformed data for consistency and usability.
- Categorized academic fields into nine categories for improved data analysis.
- Employed Non-Negative Matrix Factorization (NMF) and TF-IDF to identify main topics in user feedback.
- Created an interactive dashboard in Excel using pivot tables to visualize user insights, including goals, challenges, and • institutional usage patterns.
- Proposed actionable recommendations, such as tools for personalized learning styles, memory retention, and video • content comprehension.

#### Around the World Database Application

- Developed a relational database for a hypothetical travel application, including user data, travel packages, and subscriptions, using SQL for data storage and queries.
- Designed and implemented conceptual and logical schemas to ensure data accuracy and usability. •
- Optimized data structures by reducing redundancies, improving performance and scalability.
- Simulated real-world operations by integrating sample user data and automating processes using Python scripts for data manipulation and analysis.

The project has been recognized and rendered public as an aspirational example for future students.

# ROME, ITALY

October 2024 – Present

March 2024 – Present

October 2023 – February 2024

ROME, ITALY

ROME, ITALY October 2022 – January 2023

2023

2024

# ROME, ITALY

#### Statistical Analysis of KIC 8462852 (Tabby's Star)

- Conducted exploratory analysis of astronomical data as part of a Python programming course at the Sapienza School of Advanced Studies.
- Used Python libraries such as Pandas, NumPy, Matplotlib, and Seaborn for data cleaning and analysis.
- Performed statistical and time-series analysis to investigate anomalies in the star's brightness.
- Explored hypotheses related to circumstellar dust and comet collisions to explain irregularities.
- Designed custom statistical modules for regression and correlation analysis to test hypotheses.

## ADDITIONAL

#### LANGUAGES:

- English (Full professional proficiency)
- Italian (Full professional proficiency)
- Albanian (Native)

#### **TECHNICAL SKILLS:**

- Programming Languages: Python (Pandas, NumPy, Plotly), SQL, R, SAS
- Data Visualization: Matplotlib, Seaborn, Plotly, Dashboard creation with Excel
- Database Management: Relational Databases, SQL Queries
- Data Analysis: Data Cleaning, Transformation, Automation
- Other: Workflow Optimization, Statistical Modeling, Risk Modeling

#### **CERTIFICATIONS AND COURSES:**

- Power BI Essential Training LinkedIn Learning | January 2025
- Data Visualization for Data Analysis and Analytics LinkedIn Learning | December 2024
- Picking the Right Chart for Your Data LinkedIn Learning | December 2024
- Decision Intelligence LinkedIn Learning | December 2024
- Exploratory Data Analysis with Python and Pandas Coursera
- Medical Statistics Mini-Course Sapienza Università di Roma
- TERASTAT 2 Supercomputing Workshop Sapienza Università di Roma
- Introduction to Artificial Intelligence European Business Institute of Luxembourg
- SCAM (Scientific Computing and Mathematics Workshop) University of Prishtina

#### **INTERESTS:**

- Data science and statistical modeling
- Automation of data workflows
- Data visualization for decision-making
- AI and machine learning applications
- Financial markets and AI applications in finance