Michele Autorino

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Education

University of Illinois, Urbana-Champaign Expected Graduation: May 2027

Bachelor of Science in Computer Engineering & Statistics

- **Relevant Coursework**: Vector Calculus, Statistics and Probability I & II, Discrete Mathematics, C++ Programming, Object-Oriented Programming, Linear Algebra, Data Structures & Algorithms, Computer Architecture, Statistical Modeling I

Experience

Undergraduate Research Assistant May 2025 – Present

Electronic Visualization Lab *Chicago, IL*

- Designing and implementing a **3D graphics viewer** demonstration in **Unreal Engine** leveraging the internal **Blueprints** library and **C++ scripting**, in a team of three to showcase dynamic visualizations on TV displays at the new computer science building's groundbreaking

Undergraduate Research Assistant January 2025 – May 2025

University of Illinois, Urbana-Champaign *Urbana, IL*

- **Developed** a custom **WaveForms** script in **JavaScript** to simulate magnetic resonance on an Analog Discovery 2 FPGA for a class of 100+ students

Consumer Insights Intern July 2024 – September 2024

Beats by Dre *Remote*

- **Conducted** sentiment analysis on customer reviews with **Gemini API** & **NLTK**, extracting **user-preference** insights
- **Authored** 500+ lines of **Python** in **Colab** to benchmark **Beats** vs competitors, informing **marketing** strategy
- **Scraped**, **cleaned** & **visualized** Amazon sales data via **BeautifulSoup**, **pandas** & **NumPy**, guiding **strategic** outlook

Research Assistant June 2023 – August 2023

Case Western Reserve University *Cleveland, OH*

- **Leveraged NumPy**, **pandas** & **Matplotlib** to **clean** & **visualize** data from **150+** trials, improving **analysis accuracy**
- **Prepared** & **calibrated 30+** liquid-crystal samples for **high-precision** testing
- **Analyzed** soft-material ratio effects on **random lasing** to **guide** experimental design

Projects

Fraud Call Detection Model February 2025 – May 2025

Git, NLTK, Pandas, scikit-learn

- Collaborated with a team of three to co-develop a **machine learning pipeline** for **fraud call detection**, leveraging **Logistic Regression**.
- Preprocessed and cleaned a dataset of over **20,000 call transcripts**, engineered **TF-IDF** features, and optimized model hyperparameters in **scikit-learn**, resulting in **89% classification accuracy** with **4,000+ features**.

NBA Player Valuation Model December 2024 – January 2025

BeautifulSoup, Pandas, NumPy, Jupyter, VS Code, Seaborn/Matplotlib, scikit-learn

- Developed a machine learning model in Python with `pandas` and `scikit-learn` to predict NBA player value (*VORP*), **achieving a test R^2 of 0.78 via Lasso regression and 5-fold cross-validation**.
- Engineered features and **scraped datasets with BeautifulSoup**, reducing dimensionality **by 30% through L1 regularization** while retaining key predictors like usage rate and win shares.
- Implemented clustering methods to identify player archetypes (e.g., high-usage stars) and **visualized key insights with Matplotlib/Seaborn**.

Skills & Additional

Languages: Python, C++, JavaScript/TypeScript
Technologies/Tools: Docker, scikit-learn, pandas, Natural Language Toolkit, BeautifulSoup
Soft Skills: Portuguese (Fluent), Italian (Fluent), English (Fluent), Spanish (Professional Proficiency)