Michele Autorino

US Citizen | 804-332-7583 | ma152@illinois.edu | https://github.com/mikeyautorino2

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, Stochastic Processes

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.

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

Projects

Link Analyzer July 2025 – August 2025

Node.js, Express.js, React, PostgreSQL, Cheerio, Axios, Vercel

- Engineered a full-stack web application for real-time URL metadata extraction using `Node.js`, `Express.js`, and `React.js`, with RESTful API architecture and modular backend services.
- Implemented web scraping logic using `Axios` and `Cheerio` to extract structured data (titles, descriptions, headings, images, links) from any public web page.
- Designed a PostgreSQL-integrated version to persist analysis history per user and a privacy-first serverless alternative leveraging browser `LocalStorage`.
- Built responsive, modern frontend in `React` with reusable components and Axios-based API calls, supporting dynamic rendering of analysis results and history.

NBA Player Valuation Model December 2024 – July 2025

Python, BeautifulSoup, Pandas, NumPy, scikit-learn, Matplotlib/Seaborn, Jupyter

- Built an end-to-end ML pipeline to predict NBA player value ($VORP$), achieving a test R^2 of 0.90 using Gradient Boosting and 5-fold cross-validation.
- Engineered 20+ domain-specific features including per-36-minute stats, interaction terms (e.g., PER × MP, TS × USG), and composite indices capturing offensive/defensive impact.
- Mitigated outlier effects with `RobustScaler` and prevented target leakage by excluding metrics highly correlated with the label (e.g., BPM, OBPM).
- Tuned hyperparameters using `GridSearchCV` and `RandomizedSearchCV` across models including Lasso, Ridge, Random Forest, and Gradient Boosting.
- Visualized feature importances, revealing that PER × MP was the strongest predictor of player value.

Skills & Additional

Languages: Python, C++, JavaScript/TypeScript, Java
Technologies/Tools: scikit-learn, pandas, Natural Language Toolkit, BeautifulSoup, Node.js, Tailwind CSS, React, PostgreSQL
Soft Skills: Portuguese (Fluent), Italian (Fluent), English (Fluent), Spanish (Professional Proficiency)