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, Stochastic Processes

Experience

Software Developer May 2025 – August 2025

Electronic Visualization Lab *Chicago, IL*

- Built an interactive 3D graphics viewer in Unreal Engine, integrating C++ modules with Blueprints for dynamic scene rendering and real-time asset manipulation
- Deployed to support 30+ users, enabling immersive visualization and interactive exploration of 3D environments

Software Developer January 2025 – May 2025

University of Illinois Department of Physics *Urbana, IL*

- Implemented FFT algorithms with Tukey windowing in a custom JavaScript extension for WaveForms to simulate magnetic resonance on Analog Discovery 2 FPGA for graduate physics class
- Enhanced signal accuracy and streamlined lab demonstrations, improving experiment clarity for 100+ students

Data Analyst Extern July 2024 – September 2024

Beats by Dre *Remote*

- Ran sentiment analysis on customer reviews using Gemini API & NLTK, extracting actionable product insights
- Automated competitor benchmarking in Python, processing 4000+ reviews and product metrics to inform marketing decisions

Projects

MRI Classification Model May 2025 – August 2025

PyTorch, Deep Learning, Computer Vision

- Built a deep learning pipeline in `PyTorch` for MRI classification and segmentation with uncertainty quantification and explainability
- Implemented 2D/3D CNNs with advanced loss functions, improving class balance and segmentation accuracy
- Applied MC Dropout and Grad-CAM to enhance interpretability of predictions
- Achieved 0.89% classification accuracy and 0.90% segmentation accuracy on a 3,200+ MRI dataset

Link Analyzer July 2025 – August 2025

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

- Developed a full-stack web app in `Node.js`, `Express.js`, `PostgreSQL`, and `React` with RESTful APIs to extract real-time URL metadata
- Implemented web scraping using `Axios` and `Cheerio` to capture HTML metadata from public web pages
- Designed a responsive frontend in `React` with reusable components for dynamic rendering of results and history

NBA Player Valuation Model December 2024 – July 2025

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

- Built a machine learning pipeline in `Python` using `pandas`, `scikit-learn`, and `BeautifulSoup` to predict NBA player VORP, achieving 92% accuracy with Gradient Boosting and 5-fold CV
- Engineered 20+ domain-specific features to capture offensive and defensive impact
- Tuned hyperparameters via `GridSearchCV` & `RandomizedSearchCV` across multiple models, identifying PER × MP as the top predictor

Skills & Additional

Programming Languages: Python, C++, JavaScript/TypeScript, Java
Technologies: PyTorch, scikit-learn, pandas, NLTK, BeautifulSoup, Node.js, Express.js, React.js, Tailwind CSS, PostgreSQL
Interests: Soccer, Brazilian Jiu-Jitsu, Hiking, Watching Nature Documentaries, Sci-fi Movies