Michael Joseph Puglise

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EDUCATION

DUKE UNIVERSITY

BS in Computer Science + Visual Media
May 2026 (Expected) | Durham, NC
Cumulative GPA: 3.86 / 4.0
Dean's List with Distinction

SKILLS

PROGRAMMING

Java, JavaScript, C, R, Python, React, Svelte

WEB DEVELOPMENT

HTML/CSS, Tailwind CSS, JQuery, Figma, Heroku, Netlify, Adobe Suite, Piktochart

AI / MACHINE LEARNING

Time-series modeling, AutoML, Hyperparameter Tuning, Amazon SageMaker/Forecast

TECHNOLOGY

Linux, Node.js, Git, Jupyter Notebook, AWS, MongoDB, Tidyverse, Django REST, Plotly Dash, NoSQL, VSCode, Docker, BlueJ

COURSEWORK

- Data Structures and Algorithms
- Linear Algebra and Applications
- Introduction to Computer Systems (C)
- Programming Interview Skills
- Discrete Math for Computer Science
- Intro to Design and Analysis of Algorithms
- Intro to Data Science (R)

To be completed before Spring 2025

- Intro to Database Systems
- Probability

AWARDS

- Miami Country Day School '22 Valedictorian
- Finalist of 2024 Duke ASA DataFest
- CodePath Advanced TIP103 Student

PERSONAL INFO

- Born in Rio de Janeiro, Brazil
- Brazil/U.S. Dual Citizen
- Fluent in English, Portuguese, and Spanish
- Intermediate in Italian

WORK EXPERIENCE

TRANE TECHNOLOGIES | Data Science & Analytics Intern

May 2024 – Aug 2024 | Davidson, NC

- Used **Python** and **Amazon SageMaker** to build ML time series forecasting models
- Predicted RHVAC product demand for over 60,000 items across 27 supply stores
- Evaluated 20 models including **DeepAR+** using recurrent neural networks (**RNNs**)
- Increased forecast hit rate by 15% and projected total gross revenue by 125%
- Implemented novel sales volume classification features for items using **Pandas**

DUKE CODE+ | Software Engineer Intern | (Website)

May 2023 – Aug 2023 | Durham, NC

- Built a virtual exhibit for the Museum of Durham History using **SvelteKit**
- Received extensive training in **Web Dev**, **UI/UX**, **Git**, **NoSQL**, & **Cloud Computing**
- Used **Svelte**, **CSS**, **HTML**, and **JavaScript** to create an educational gallery display
- Connected to **MongoDB** to store submissions and create back-end admin panel
- Deployed site first via **Heroku** and then **Amazon Web Services** for better scalability

CS330 UNDERGAD TEACHING ASSISTANT

- Hosted office hours for *Intro to Design and Analysis of Algorithms*
- Led lessons on graph, approximation, randomization, DP, and NP-hard algorithms
- Answered technical questions on runtime complexity and discrete math

PERSONAL PROJECTS

CARBON FOOTPRINT EVALUATOR | (GitHub)

- *Python • JavaScript • HTML/CSS | (Website)*
- Built an interactive website informing users about unsustainable practices
- Used **Pandas API** to read a CSV file on carbon emissions per capita
- Wrote a **Python script** to help one realistically lower their carbon footprint
- Queried collected survey data during the Fall 2023 MLH HackDuke Hackathon

FOREX MACHINE LEARNING MODEL | (GitHub)

- *Python • Jupyter Notebook*
- Implemented a **neural network** to project future trends in returns
- Processed Forex/Crypto candlestick data using **First Rate** and **Alpaca Stock API's**
- Minimized error by implementing LDA during the 2023 Duke Ignite Hackathon

EXTRACURRICULARS

DUKE APPLIED MACHINE LEARNING (DAML)

- Hosted March 2024 Duke x Harvard LIVE AI online hackathon after:
- Building a hackathon registration site with **React** and **SQLite** for Tech Tree Root
- Using **Django REST Framework** to connect the web app to existing **SQL** database
- Coordinating **wireframing** and **UI/UX** efforts as the front-end team lead

DUKE RESIDENT ASSISTANT

- Managed a budget of $10,000 as part of the Community Engagement Committee
- Helped mentor 320 incoming freshmen with academic and personal concerns
- Led diversity and inclusion seminars geared towards community building