

Mario Auqui

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EDUCATION

Wake Forest University

Winston-Salem, NC

Bachelor of Science in Computer Science | Entrepreneurship Minor

December 2025

Courses: Software Engineering | Neural Networks & Deep Learning | Algorithms & Analysis | Computer Systems II

Web Applications | Computer Vision | Data Structures | Databases | Data Science | Entrepreneurship II & III

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, TypeScript, SQL, C, R, HTML, CSS, Bash

Frameworks & Libraries: React, Next.js, Node.js, Flask, PyTorch, TensorFlow, Keras, scikit-learn, Pandas, NumPy, OpenCV, Matplotlib

Databases: PostgreSQL, MySQL, MongoDB

Cloud & DevOps: AWS, Azure, Docker, Git, GitHub, Vercel, Jupyter Notebook, Linux

Methods & Tools: Agile/Scrum, Jira, Figma, Confluence, SharePoint, Microsoft Office

EXPERIENCE

Undergraduate Research Fellow

May 2025 – Present

Wake Forest University

Winston-Salem, North Carolina

- Applied computer vision and object detection to analyze aerial imagery, using deep learning models to detect and map tree distributions in large, complex environments
- Developed and fine-tuned machine learning models (YOLOv8-YOLOv12) in Python/PyTorch, improving detection accuracy under challenging real-world conditions such as dense canopy and variable lighting
- Built scalable data pipelines to process UAV imagery into labeled datasets using tools like Roboflow, enabling efficient model training and evaluation on over 1200 image patches
- Collaborated with interdisciplinary faculty to design experiments, perform quantitative analysis, and communicate results through technical presentations and research posters
- Gained experience in model training, evaluation metrics (Precision, Recall, mAP), data visualization, and delivering results on strict deadlines in a research team setting

Machine Learning Intern

May 2024 – August 2024

The Clearing House

New York, New York

- Developed and deployed a machine learning model on AWS SageMaker to forecast weekly pre-funding requirements for banks, improving operational efficiency across 90% of daily wire transactions
- Engineered an end-to-end data pipeline using Python, Jupyter Notebook, and Amazon S3 to process and analyze one year of CHIPS transaction data for model training, validation, and testing
- Achieved over 85% predictive accuracy through hyperparameter tuning and model evaluation, enhancing reliability in financial forecasting
- Presented actionable insights and model impact to 50+ stakeholders, including executives and VPs, influencing data-driven decision-making in financial operations

Project Management Intern

May 2023 – August 2023

Atlantic General Construction

New York, New York

- Led day-to-day project workflows in the owner's absence, delegating tasks, resolving challenges, and ensuring on-time delivery of client-facing construction projects
- Interfaced with clients and cross-functional teams to gather requirements, deliver updates, and handle 5–10 weekly inquiries, ensuring transparency and stakeholder satisfaction

PROJECTS

Personal Website

October 2025

Wake Forest University

Winston-Salem, NC

- Built a fully responsive personal website with Next.js, React, TypeScript, and Tailwind CSS to showcase projects, research, and experience
- Engineered a clean, reusable component system with smooth layout transitions and optimized performance
- Deployed on Vercel with streamlined CI/CD for fast, reliable builds and hosting

PASSIONS & FUN FACTS

Boxing & Brazilian Jiu-Jitsu | Photography | Reading | Fitness | Road Trips | Animal Lover | Sneakers | Outdoors