Nile Anderson

niletributary@gmail.com | +447597738518 | Oxford
Links: Portfolio | LinkedIn: Nile Anderson | GitHub: NileRiva | Website: nileanderson.com

EDUCATION

Oxford Brookes University **Oct. 2025**
M. Sc., Artificial Intelligence *Oxford, England*

- Distinction Overall and Distinction in Dissertation.
- Pursued Practical Modules in Research Methods, Autonomous Intelligent Systems, Statistical Modelling, Machine Learning & Data Mining, Principles of Data Science.
- Dissertation: Developing uncertainty-aware trajectory prediction using Conformal Prediction techniques for safety-critical applications supervised by Fabio Cuzzolin.

University of the West Indies **Jul. 2023**
B. Sc., Electronics Engineering *Mona, Jamaica*

- First Class Honors, Entered University as Top Matriculant, Topped Electronics Program; 4.03/4.3 GPA.
- Chosen for Huawei Seeds of the Future Enrichment Program, went on Cultural Exchange to Panama
- Panelist in eDrive Innovation Challenge

Dec. 2018
MBBS, Medicine and Surgery (Pre-clinical years completed) *Mona, Jamaica*

- Completed pre-clinical training including courses: Neuroscience I & II, Cell Biology, Anatomy and Physiology, Introduction to Medical Practice, Health Care Concepts, and clinical rotations
- Gained foundational knowledge in human physiology, neuroanatomy, and clinical medicine
- Clinical experience included taking patient history, and observing clinical workflows
- Coursework in Cardiovascular System included training in ECG theory and interpretation
- Played Main Role in Charity Play (helped raise 4.2 M JMD for Hospital)

Manning's School **Jul. 2016**
A. Sc., Natural Sciences *Mona, Jamaica*

- Placed 1st Nationally and 2nd Regionally in Integrated Mathematics, 2nd Regionally in Electrical and Electronic Tech. Unit 1 & 2, 2nd Nationally in Physics Unit 2, 3rd Nationally in Physics Unit 1, 8th in Environmental Sci.
- Recognized as the Region's Most Outstanding Candidate in the Sciences in CSEC Examinations

SKILLS, HOBBIES, AND INTERESTS

- **Programming:** C, C++, C#, Python, Java, MATLAB, HTML/JavaScript/CSS, VHDL, Ladder Logic, Assembly
- **Frameworks and Libraries:** Pandas, Flask, FastAPI, NumPy, ASP.NET MVC, scikit-learn, statsmodel
- **Engineering Software:** Proteus, AutoCAD, Eagle CAD, RS Logix 5000, FactoryTalk, LabView, Multisim
- **Other Skills:** Data Analysis, Basic Spanish Comprehension, Basic Photoshop, Basic Graphic Design
- **Soft Skills:** Project Management, Problem Solving, Leadership, Communication
- **Hobbies and Interests:** Drama, Chess, Badminton, Football, Videography, Photography

WORK EXPERIENCE

University of Oxford **Dec. 2025 – Present**
Software Engineer *Oxford, UK*

- Working within the Computational Health Informatics Lab to enhance digital health and physiological monitoring systems in a clinical research environment.
- Developing software improvements for embedded components, including the integration of additional sensing modalities

Oxford Brookes Racing Autonomous **Oct. 2024 – Apr. 2025**
Software Team Lead *Oxford, UK*
- Streamlining key software components for the Autonomous Racing Project, including Perception, Simulation, Path Planning, Control, and Localization & Mapping.
- Coordinating with the hardware team to ensure seamless integration of systems.

Freelance **Sep. 2016 – Present**
Tutor *Mona, Jamaica*
- Recruited by several academic units for student support in a variety of courses.
- Courses include Introductory Statistics for Social Sciences, Calculus, and Mathematics for Social Sciences.
- Supported students on Capstone/Lab projects, helping them navigate technical challenges

Microsoft Leap **Aug. 2023 – Dec. 2023**
Software Engineer Apprentice *Remote*
- Collaborated on a pilot project for empowering Jamaican youth through platform for Networking/Opportunity
- Utilized Agile methodologies and Azure DevOps for Project management.

University of the West Indies **Sep. 2020 – Dec. 2023**
Teaching Assistant *Mona, Jamaica*
- Assisted in the delivery of Microprocessors & Embedded Systems, Circuit Analysis & Devices (Pass Rate: 83.8%), Analogue & Digital Communication Sys. (Pass: 78.9%, 92.9%) and Signals and Linear Sys. (Pass: 73.3%)

IDB Lab & JPS Foundation eDrive Project **Jul. 2023 – Aug. 2023**
Green Engineering Intern *Kingston, Jamaica*
- Contributed to Pilot for Research Project into the Viability of Electric Vehicles introduced into the fleet.
- Analysis of Vehicle Fleet Data and assessment of Electric Vehicle Charging Stations

New Fortress Energy **Jul. 2022 – Aug. 2022**
Field Engineering Intern *Kingston, Jamaica*
- Led a team of Interns in drafting a proposal for a new company role to optimize costs.
- Automated the Analysis and Reconciliation of the Flow Meter Data

LEADERSHIP EXPERIENCE

UWI Mona Guild **Jun. 2021 – Jun. 2022**
1st Vice President *Mona, Jamaica*
- Executed Student Feeding Program to provide over 1500+ student meals.
- Convened Student Organizations for Collaboration on Disaster Relief Project
- Managed Collaborative and Developmental Space for Club Leaders

Mona Engineering Society **Jul. 2020 – Jun. 2021**
President *Mona, Jamaica*
- Got students (via NSBE) into sessions with 'Big Tech' Companies
- Joint Mental Health Campaign with CMU FEAT and UTECH SOE
- Advocated for Free Living for students forced to do School in Summer.

UWI STAT **May. 2020 – May. 2021**
Vice President (Alumni Relations) *Mona, Jamaica*
- Fortified Alumni Ambassador Databases and launched Mentorship Program
- Prepared and Edited Newsletter to keep Alumni informed of Corps Events

Irvine Hall **Jun. 2018 – Jun. 2019**
Block Representative *Mona, Jamaica*

- Planned and Hosted Student Developmental Sessions
- Enlisted Peer Mentors for Residents, and Block was rewarded for the Highest Cumulative GPA

AWARDS AND HONORS

- Prime Minister's National Youth Award for Excellence in Academics, 2024
- Jamaican Rhodes Scholar, 2024
- Top Electronics Engineering Graduate, 2023
- Caribbean 35 Under 35 Award, 2023
- Scientific Research Council STEM Ambassador, 2023
- Governor General Achievement Award, 2018
- Taylor Hall Valedictorian, 2023
- Outstanding Contribution, Irvine Hall, 2019
- Most Outstanding Performing Arts Member, Irvine Hall, 2017
- Top Matriculant and Open Scholar, 2016
- 4H Public Speaking Champion, 2016
- JCDC Speech Festival Gold Medalist, 2016
- Most Outstanding Candidate in Sciences in the Region, 2014
- Jamaican Mathematical Olympiad Merit Award, 2014

PROJECTS

Uncertainty-Aware Trajectory Prediction: Enhanced ASTRA Model **2025**
Researcher *Oxford, England*

- Developed post-hoc uncertainty quantification for the ASTRA pedestrian trajectory prediction model using Conformal Prediction techniques.
- Achieved distribution-free statistical guarantees for safety-critical applications in autonomous driving with formal coverage guarantees.
- Conducted the evaluation on ETH datasets while trying to maintain the computational efficiency of the PyTorch Deep Learning Model.

ML Health Prediction: Chronic Kidney Disease Classification **2025**
Developer *Oxford, England*

- Developed a comprehensive machine learning pipeline for chronic kidney disease prediction, achieving over 95% accuracy in patient diagnosis using random forest classifiers.
- Implemented advanced data preprocessing techniques including imputation, categorical encoding, and feature scaling to optimize model performance.
- Conducted comparative analysis between multiple classification algorithms, evaluating performance via precision, recall, and ROC-AUC metrics.

Monte Carlo Localization Algorithm for Cozmo Robot ↗ **2025**
Developer *Oxford, England*

- Developed a Probabilistic Gaussian Sensor Model and Motion Model from experimentally collected data.
- Implemented Monte Carlo Localisation with models comparing low variance and independent sampling
- Integrated Monte Carlo Localisation into Robot Navigation Task

Synergy: AI Audio to Workflow Tool (OxAI Summer Hackathon) ↗ **2024**
Developer *Remote*

- Collaborated with an unfamiliar, international team to design and build an AI-driven MVP within 48 hours, focused on converting unstructured audio input into actionable project reports.
- Extended the experimental AI JSON Framework by developing custom actions for transcription (via Whisper API) and logical report generation using Claude-3 LLM
- Designed a structured workflow that transforms audio content into JSON schemas detailing tasks, durations, and execution sequences for efficient project management.
- Developed a tool to transcribe audio and organize ideas into structured reports, enabling teams to efficiently transform raw project discussions into organized task flows.

Remote Controlled Utility Robot for Navigating Unsafe Spaces **2023**
Developer *Mona, Jamaica*
- Implemented a Wi-Fi-controlled robot capable of navigation and environment manipulation via a robotic arm.
- Established real-time communication between the robot and user through WebSocket and TCP socket servers.
- Built out the front end from scratch using HTML/CSS/JS and backend using Python and Shell Script.

Simple Smart Hub **2023**
Developer *Mona, Jamaica*
- Developed a user-friendly IoT platform for centralized home appliance control.
- Embedded System implemented using ESP32 coded with Arduino C
- Automated Appliance control based on input from sensors and geographical data called on from external API

Remote-Control Audio Amplifier **2022**
Developer *Mona, Jamaica*
- Designed PCB Circuits for the remote and Amplifier using EagleCAD.
- Calculated Component Values to optimize for desired frequency range according to James Baxandall model.
- Troubleshot and solved a problem with the available SPI Library that was causing the system to 'freeze.'

Omnidirectional Autonomous Obstacle Avoidance Robot **2021**
Developer *Mona, Jamaica*
- 3D-printed and assembled Chassis and mecanum wheels.
- Implemented using ATmega32 Chip as microcontroller and programmed in AVR C
- Coded a simple algorithm for heuristic navigation based on distance from ultrasonic mounted on a servo.

CERTIFICATIONS

Artificial Intelligence Fundamentals
IBM SkillsBuild, 2024

Data Fundamentals
IBM SkillsBuild, 2024

Microsoft Leap Software Engineer Pathway
Microsoft Leap, 2023

Deep Learning Onramp
MathWorks, 2023

OTHER SELECT INVOLVEMENT, ACTIVITIES, AND AFFILIATIONS

- **Volunteer Experience**: Savanna la mar Public Hospital, National Commission for UNESCO, New Fortress Energy Foundation, Sagicor Foundation, MBBS/DDS Smoker
- **Other Select Leadership:** Manning's School: Head Prefect, House Captain, Chess Club President.

- **Mentorship:** Advisor to the Guild Vice President, Advisor to the Guild PRO, Advisor to MES President
- **Affiliations:** Jamaica Artificial Intelligence (AI) Association, Scientific Research Council, Rhodes AI Lab