

# Rodolfo Croes

AI/ML Engineer

LinkedIn: [www.linkedin.com/in/rodolfo-croes](https://www.linkedin.com/in/rodolfo-croes)

Mobile phone: +44-7521-452871

Email: [rodolfocroes@hotmail.com](mailto:rodolfocroes@hotmail.com)

Github: <https://github.com/RJCroes>

## PROFESSIONAL SUMMARY

Innovative AI/ML Engineer with a strong foundation in artificial intelligence, machine learning, and data science. Currently pursuing an M.Sc. in Artificial Intelligence, with expertise in large language models, prompt engineering, and optimization algorithms. Demonstrated ability to design and implement advanced AI solutions, from natural language processing to stochastic modeling. Skilled in Python, PyTorch, and various ML frameworks, with a passion for solving complex problems using cutting-edge AI techniques.

## KEY TECHNICAL SKILLS

- **Programming Languages:** Python, R, SQL, C, HTML, CSS
- **Machine Learning Frameworks:** PyTorch, Keras, Scikit-learn
- **Cloud Platforms:** Microsoft Azure, AWS
- **Natural Language Processing:** Large Language Models, Prompt Engineering
- **Optimization Algorithms:** Tree of Thoughts, A\* Search, Hill Climbing
- **Data Analysis & Visualization:** Jupyter Notebooks, R Studio
- **Version Control:** Git
- **IDEs:** Microsoft VS Code, Eclipse, Android Studio
- **Other Tools:** OpenAI API, Intel Quartus Prime Software, VirtualBox

## CERTIFICATION

- Generative AI with Large Language Models by DeepLearning.AI and AWS - [Link](#)
- Azure AI Fundamentals by Microsoft - [Link](#)

## EDUCATION

M.Sc. in Artificial Intelligence - University of Stirling, UK January 2023 - October 2024 (Expected)

B.Sc. in Computer Science - Coastal Carolina University, Conway, SC, USA August 2016 - December 2020

## LANGUAGES

English, Papiamentu, Spanish, Dutch

## PROFESSIONAL EXPERIENCE

Sales Associate: Citgo Savaneta, Savaneta, Aruba

June 2021 – January 2023

- **Managed sales transactions and provided excellent customer service** in a fast-paced petrol station environment.
- **Developed strong interpersonal and communication skills** while handling diverse customer inquiries.
- **Maintained accurate records** of all cash and credit transactions, ensuring financial integrity.
- **Adapted quickly** to changing customer needs and market trends, contributing to increased customer satisfaction.

Help Desk Technician: iStore Aruba, Oranjestad, Aruba

May 2018 - July 2018

- **Provided technical support** for Apple products, troubleshooting software issues and educating customers on problem prevention.
- **Assisted in sales of Apple products** and accessories, enhancing product knowledge and customer service skills.
- **Collaborated with team members** to ensure efficient customer service and maintain a positive store environment.
- **Developed strong problem-solving skills** while addressing a wide range of technical issues.

## ACADEMIC PROJECTS

**AI Dissertation Project:** Enhancing Large Language Model Performance on Complex Reasoning Tasks Using Tree of Thought Prompting and Search Algorithms | University of Stirling, 2024

- Led research on Tree of Thoughts (ToT) prompting and advanced search algorithms to improve LLM reasoning.
- Implemented and adapted the ToT framework for multiple benchmarks including GSM8K, GSM-HARD, and StoryCloze.
- Developed novel search algorithms, including an A\* search implementation, optimizing the ToT approach.

**Machine Learning Pipeline:** Retail Store Performance Prediction | University of Stirling, 2023

- Developed a ML pipeline using Logistic Regression, Decision Trees, and Multi-layer Perceptron Neural Networks.
- Conducted data preprocessing, feature engineering, and implemented cross-validation and hyperparameter tuning.
- Created visualizations and confusion matrices to evaluate and communicate model results effectively.

**Stochastic Optimization Model:** Minecraft Wheat Farming | University of Stirling, 2024

- Designed and implemented a stochastic optimization model using Python.
- Utilized random search and hill climbing algorithms to determine optimal harvesting times.
- Demonstrated skills in problem formulation, stochastic modeling, and optimization algorithm implementation.