

CLEVELAND CROSSLING

Computer Scientist | AI Engineer | Aspiring Data Scientist

+27 60 669 5115 | +1 407 467 3685

cleveland1.crossling@gmail.com

Cleveland James Crossling

Full Names	Nationalities	Current Residence
Cleveland James Crossling	South African & Portuguese	United States

PROFILE SUMMARY

Computer Science graduate (BScHons, Cum Laude, Top Project Award) now pursuing an **MSc in Computer Science with a concentration in Artificial Intelligence and Machine Learning** at East Tennessee State University, where I work as a Research Assistant on autonomous vehicle driving models. Demonstrated excellence in applied AI, computer vision, NLP, and graph-based modelling, with **international research exposure** including a publication and conference presentation in Nagoya, Japan. Proven ability to design and deploy intelligent systems across diverse domains, including healthcare, sports analytics, and autonomous systems. Seeking opportunities in **data science and applied AI research** to apply machine learning, statistical modelling, and data-driven decision-making to real-world problems.

SKILLS

- Programming Languages:** Python, Java, JavaScript, C#, C++, SQL, x86 Assembly.
- Tools & Frameworks:** PyTorch, TensorFlow, Keras, Scikit-learn, Pandas, NumPy (incl. GPU Alternatives), Matplotlib, Git, ASP.NET, Microsoft SQL Server.
- Data Science & AI:** Data Cleaning, Feature Engineering, EDA, Neural Networks, Autoencoders, NLP, Computer Vision, Clustering, Segmentation, Graph-Based Modelling, Transformers, RWKV, Neuroevolution.
- Soft Skills:** Technical presentations, Scientific writing, Public speaking, Team leadership.
- Languages:** English (Native).

EMPLOYMENT HISTORY

- Research Assistant, East Tennessee State University (Part Time)** *2026 January – Present*
- Assembling and conducting experiments with novel autonomous vehicle driving models.
 - General research for the Computing Department.
- Assistant Researcher, University of Johannesburg (Full Time)** *2025 January – 2025 December*
- Developing ballet temporal action localization and sport injury detection models.
 - Conducting experiments, analysing data, and contributing to academic publications.
- Student Assistant, University of Johannesburg (Part Time)** *2024 February – 2024 November*
- Evaluated assignments, tests, and research papers for final-year Computer Science students.
 - Provided guidance to students during practical sessions and clarified complex course concepts.
- Junior Developer, OSOV LLC (Part Time)** *2023 July – 2024 December*
- Developed and maintained software systems initiated by a senior developer.
 - Provided consulting services for a web development company, enhancing web applications.
- Subscriptions and Managed Systems Coordinator, CloudWays (Part Time)** *2023 January – 2023 July*
- Managed subscription systems and finances for licenses, internet, and VoIP services.
 - Coordinated client onboarding and resolved license-related issues.
 - Authored a handover manual to streamline role transitions.

EDUCATION

MSc Computer Science with concentration in AI and Machine Learning,
East Tennessee State University

2026 January – Present

- Current GPA: 3.925
- Spring subjects: Software Project Management, Research Methods in Computer Science, Machine Learning, and Data Analytics.

BScHons in Computer Science with Artificial Intelligence,
University of Johannesburg

2024 February – 2024 November

- Graduated **Cum Laude**.
- Top student in Big Data Analytics, Biometrics, and Honours Year Project.
- Authored a publication in Biometrics and presented at the Conference on Computational Intelligence and Intelligent Systems in Nagoya, Japan.

BSc Computer Science and Informatics,
University of Johannesburg

2020 – 2023

- Ranked in the top 5% in the 2023 class for Computer Science.
- Developed an unsupervised clustering model using graph data structures for analysing weapon theft statistics in South Africa.

NSC, Northcliff High School

2015 – 2019

KEY PROJECTS

Personalized PyTorch Frameworks for Custom Model Development
Developed to streamline the assembly of novel ML research projects. It consists of custom data preparation, dataloader, training, and evaluation frameworks for simple utilization in developing a broad array of Pytorch based models.

Personalized Neural Network Modelling Suite
Constructed with the goal of developing a JEPA model from low level libraries and Python, it consists of major components necessary for basic modular architecture development for ML modelling (Feed forward, convolutional, activation, pooling, transformer, and embedding layers).

Brain Tumor Segmentation for Sub-Saharan Populations
Designed preprocessing techniques and trained segmentation models on medical imaging data. Tackled dataset bias and optimized models for local demographic generalization.

Variational Autoencoder for Audio-to-Image Generation
Explored multi-modal deep learning by encoding audio spectrograms to generate corresponding images. Handled time-series data and latent space exploration.

Neuroevolution for Classification & Generation (MNIST)
Applied genetic algorithms to evolve neural networks for digit classification and image generation. Compared performance with traditional backpropagation methods.

RWKV Replication for Language Translation
Conducted a replication study on a transformer-alternative RNN. Evaluated model generalization and parameter efficiency on translation tasks.

Graph-based Unsupervised Clustering for Crime Analysis
Developed a graph clustering model to identify trends in weapon theft across South Africa. Applied centrality metrics and modularity for pattern discovery.

HONOURS & PUBLICATIONS

- \$5000 Merit Scholarship for Graduate Study at East Tennessee State University (2025)
- Cum Laude for BScHons Computer Science with Artificial Intelligence – University of Johannesburg (2025)
- Top Honours Project Award – University of Johannesburg (2024).
- Presented biometrics research at the 7th International Conference on Computational Intelligence and Intelligent Systems (Nagoya, Japan, 2024).

- Presented research to international delegations at the Johannesburg Business School as part of the UJ AI Hub team (2024).
- 2nd Place Academy of Computer Science and Software Engineering Projects Day Award – University of Johannesburg (2023).
- Top 10 Computer Science Student Award – University of Johannesburg (2023).
- Bursary for continued study awarded for 70% and above - University of Johannesburg (2023).

REFERENCES AVAILABLE UPON REQUEST