Qaasim Emeran - BSc Maths and Stats

Software Developer | Analyst | RPA | AI & ML | Computer Vision

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📍 Cape Town, South Africa   🚗 Code B

🪪 Profile

I'm a **BSc Mathematics and Statistics graduate** specialising in **Automation, Machine Learning, Artificial Intelligence** and **Computer Vision**. My background in mathematics and statistics enables me to approach challenges analytically, turning raw data into actionable insights. My experience include automating complex business processes using **UiPath** and **Xceptor**, enhancing operational efficiency and allowing teams to focus on strategic initiatives. Additionally, I have developed computer vision systems uslising AI to process real-time data for applications such as exercise form detection and multi-camera tracking.

💼 Professional Experience

CaliVision, *Computer Vision Developer*   Nov 2024 – present | Cape Town, South Africa

- Utilised real-time object detection and image segmentation software, achieving a 95% detection accuracy and reducing processing time by 15%
- Developed multi-camera detection algorithms to track individuals across 2+ camera feeds, increasing coverage accuracy by 50%.
- Implemented methods to improve object tracking consistency, reducing tracking errors by 25% in dynamic environments.
- Integrated camera calibration matrices, enhancing spatial accuracy by 15% and improving object localization precision.

Apex Group

RPA Developer   Oct 2023 – Oct 2024 | Cape Town, South Africa

- **Designed, developed, and deployed over 20 RPA solutions**, directly contributing to a weekly time savings of 150+ hours and enhancing process scalability by 20%.
- **Identified and analyzed automation opportunities** within complex workflows, ensuring smooth integration of RPA systems while maintaining performance, security, and compliance standards.
- **Collaborated with cross-functional teams** to optimize existing processes, achieving error-free post-deployment results and reducing client complaints by 15%.
- **Implemented Test Mode functionality**, significantly improving debugging efficiency by reducing bug fix times by up to 1 hour per process, resulting in a 35% boost in team productivity.
- **Provided onboarding and mentorship** to new interns, increasing intern productivity and contributing to a stronger, more efficient team dynamic.

Xceptor Developer

- **Leveraged APIs and SQL databases** to query and extract data from multiple sources, processing records daily, and transferring it to spreadsheets for further processing and transformation within Xceptor.
- **Developed automated workflows** that reduced data extraction and transformation time by 20%, increasing report generation speed and accuracy.
- **Implemented advanced data transformations**, improving reporting consistency by 25% and ensuring that data was clean, structured, and ready for analysis.
- **Streamlined data processing workflows**, increasing overall process efficiency and reducing manual intervention by 50%.

RPA Business Analyst

- **Collaborated with senior leadership and key stakeholders** to assess and evaluate automation opportunities, aligning business goals with RPA solutions and ensuring seamless integration across departments.
- **Utilized UiPath BA tools** to document workflows, perform process mapping, and analyze the impact of automation on business operations.
- **Supervised vendor performance**, ensuring service level agreements (SLAs) were met and maintaining a 95% compliance rate through proactive support and coordination.
- **Enhanced business operations** by identifying automation opportunities, reducing manual effort and improving process efficiency.
- **Ensure scalable solutions align** with business objectives by evaluating ROI, optimizing processes, and driving continuous improvement.

🎓 Education

BSc Mathematics and Statistics, *University of the Western Cape*   2022 | Cape Town, South Africa

I completed my degree majoring in both mathematics and statistics with a capstone project that explores the application of mathematical models to predict stock price movements, showcasing how mathematical formulas can be utilized to analyze and forecast financial trends.

Software Engineering, *ALX - Nano Degree* 🔗   2023 | Online, International

I completed my Software Development degree with a capstone project in which I designed and developed an eCommerce website, applying key development principles and technologies to create a functional, user-friendly platform.

📁 Projects

NanoGPT, *Artificial Intelligence & Machine Learning*   Feb 2025
  Developed a Transformer-based character-level language model in PyTorch for text generation, utilizing self-attention and multi-head attention for sequence modeling. Optimized with efficient batching and AdamW, with a validation system to track performance and enable iterative improvements.

Live Stream Human Detection, *Computer Vision & Artificial Inteligence* ⤢   Nov 2024
  Utilizes OpenCV for advanced computer vision capabilities and YOLO for real-time human detection in both video recordings and live streams.

Generating Audit Packs, *RPA Automation*   Sep 2024
  Streamlined financial report generation, validation, auditing, and transfer to the business network, with automated confirmation emails sent to the business team upon completion.

Real Estate Pricing Model, *Analytics & Machine Learning*   Sep 2023
  Analyzed home prices by evaluating key factors to identify market trends and assess whether prices fall within a competitive range. This analysis provides valuable insights for buyers and sellers, enabling informed decisions based on current market conditions and future projections.

Ecommerce Website, *Web Development & Database Administration* ⤢   Jun 2023
  Developed a backend-focused eCommerce clothing website built with Python, utilizing Flask for the server, MongoDB for the database, Stripe for payment processing, and Bootstrap for styling.

API - Administrative System, *API Development & Database Administration* ⤢   May 2023
  Developed an API authentication system that optimized user registration, login, logout, and password management processes, improving security and overall user experience.

📚 Courses

AWS Cloud Practitioner, *Amazon*   present

Machine Learning A-Z, *Udemy* ⤢   present

Microsoft Azure Fundamentals, *Mecer* ⤢   Nov 2024

Microsoft 365 Fundamentals, *Mecer* ⤢   Nov 2024

Microsoft 365 Craft effective prompts for Copilot, *Mecer* ⤢   Nov 2024

Microsoft 365 Copilot User Enablement Specialist, *Mecer* ⤢   Nov 2024

Microsoft Security, Compliance, and Identity Fundamentals, *Mecer* ⤢   Nov 2024

AI Career Essentials, *ALX* ⤢   Sep 2024

Automation Business Analyst, *UiPath* ⤢   Nov 2023

Automation Developer, *UiPath* ⤢   Nov 2023

🧠 Skills

Languages: Python, JavaScript, C/C++, Linux, NodeJS, TypeScript, Express, Flask, React

Artificial Intelligence: Pytorch, LLM, NLP

Machine Learning: TensorFlow, Scikit-learn, SciPy, Pandas, Numpy, Matplotlib

Automation: UIpath (Studio, Orchestrator, Task Capture), Xceptor

Business Intelligence: Power BI, Tableau

Computer Vision: OpenCV, YOLO, AI

Database Management: SQL (SQL workbench) , MongoDB (Atlas, Compass) , Redis

Version Control: Git, GitHub, CI/CD

IDE: VScode, Replit, PyCharm, JupyterNB, Google Colab, Anaconda

Testing: Postman, Unittest

Microsoft: Azure, Azure DevOps, Copilot, Word, Excel, Teams, Outlook

Web Development: HTML, CSS, Bootstrap

Soft Skills: Leadership, Teamwork, Time Management, Adaptability, Continuous Learning, Mentoring, Detail Oriented, Problem-solving,

🧩 Volunteering

Passionate about education and mentorship, I have dedicated my time to empowering others through tutoring and leadership roles. As a **Software Development Tutor** (2022–2023), I mentored aspiring developers, while my role as a **Class Representative** (2020–2021) helped bridge communication between students and faculty. I also supported academic growth as a University **Mathematics and Statistics Tutor** (2019–2021) and a **High School Mathematics Tutor** (2018–2019), helping students strengthen their skills and build confidence. Through these roles, I have aimed to give back by fostering learning and growth in others.