

DALTONE OTIENO

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SUMMARY

Innovative and results-driven Data Scientist and Software Engineer with hands-on experience in developing scalable AI solutions, full-stack web applications, and ML models for real-world impact. Adept at turning complex data into actionable insights and leading tech communities to promote AI adoption across Africa. Proven track record of leading AI workshops, building intelligent systems for agriculture and healthcare, and mentoring future tech talents. Skilled in Python, JavaScript, TensorFlow, Django, FastAPI, and Power BI, with a passion for using technology to solve social and economic challenges.

EDUCATION

Bachelor of Information Technology — *Expected Graduation Date: May 2026*

Kenyatta University – Nairobi, Kenya

- Relevant coursework: Machine Learning, Data Science, Software Engineering, Database Systems
 - **Achievements:**
 - o Successfully completed an AI-powered web application for small-scale farmers as a final-year project.
 - o Active member of the Engineering Students Association (ESA-KU), served as Secretary General.
 - o Led several tech communities such as Google Developer Student Club, Zindi Data Science Community and Alliance4ai.
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Software Engineering — Feb 2024 – Feb 2025

ALX Africa – Nairobi, Kenya

- Intensive 12-month software engineering program focused on full-stack development and scalable applications, specializing in backend development (month 9 to 12).
- **Skills Gained:**
 - o Backend development with Python (Django, Flask) and JavaScript (Node.js).
 - o Frontend development using JavaScript, React, HTML, and CSS.
 - o Database management with MySQL and PostgreSQL.

- API development using REST and GraphQL.
 - Containerization and deployment with Docker and Kubernetes.
 - Version control with Git and GitHub.
 - Writing efficient, clean code and performing code reviews.
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SOFT SKILLS

- Excellent communication and interpersonal skills
 - Strong leadership and mentorship abilities
 - Critical thinking and analytical mindset
 - Problem-solving and decision-making
 - Adaptability in fast-paced environments
 - Team collaboration and project management
 - Time management and multitasking under pressure
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TECHNICAL SKILLS

- **Programming:**
 - Python (intermediate to advanced)
 - JavaScript (advanced)
 - HTML, and CSS (advanced)
 - SQL(advanced)
 - C programming (intermediate)
 - Java (intermediate)
- **Frameworks/Libraries:** TensorFlow, Django, FastAPI, Flask, Node.js
 1. **Django Framework**(intermediate to advanced):
 - Models, Views, and Templates (MVT) Architecture
 - ORM (Object-Relational Mapping) for efficient database handling
 - Middleware and custom decorators
 - RESTful API development using Django REST Framework (DRF)
 - Authentication and authorization (JWT, OAuth)
 - Signal handling and background tasks using Celery
 - Performance optimization (caching, query tuning)
 - Deployment using Docker and Kubernetes

2. TensorFlow(intermediate to advanced):

- Building and training Convolutional Neural Networks (CNNs) and Recurrent Neural Networks (RNNs)
 - Implementing custom loss functions and metrics
 - Transfer learning and model fine-tuning
 - Using TensorFlow Keras API for fast prototyping
 - Deploying TensorFlow models using TensorFlow Serving
 - Data preprocessing and augmentation using tf.data
 - Model optimization with quantization and pruning
 - Implementing distributed training using TPUs and GPUs
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- **Databases:** MySQL(Advanced), PostgreSQL(intermediate)
 - **Data Science & ML:** Data Cleaning, Data Visualization, Power BI, NLP, CNNs, Model Training & Deployment
 - I'm skilled at cleaning large datasets, handling missing data, and ensuring data quality using tools like Pandas and NumPy.
 - I've created dynamic visualizations using Matplotlib, Seaborn, and Plotly to uncover insights, and built interactive dashboards with Power BI for real-time data monitoring.
 - My experience in Natural Language Processing (NLP) includes text preprocessing, sentiment analysis, and text classification using Spacy, NLTK, and Transformers.
 - I've built and trained Convolutional Neural Networks (CNNs) for image classification and object detection using TensorFlow and Keras.
 - I'm proficient in deploying models to production using FastAPI and Docker, ensuring scalability and performance optimization.
 - **Tools:** Git, Docker, Kubernetes, AWS, Linux, Jupyter, VS Code
 - **Languages:** English (Fluent), Swahili (Native), French(Basic), Dholuo (Native)
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PROFESSIONAL EXPERIENCE

Data Scientist and Software Engineer - *Freelance (2022 - Present)*

- Developed AI and ML models for clients to solve business problems.
 - Scraped and cleaned large datasets using Python, Selenium, and BeautifulSoup.
 - Built and deployed scalable web applications using Django, Flask, and FastAPI.
 - Delivered data insights and business recommendations based on statistical analysis.
 - **Notable Achievement:** Successfully developed an AI model to detect lung cancer based on images from CT Scans. Model accuracy 97%
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Data Science and Analytics Intern - *FutureInterns (2025 - Present)*

- Gaining hands-on experience in data analysis, visualization, and machine learning.
 - Working on real-world projects to develop actionable insights and enhance decision-making.
 - Collaborating with cross-functional teams to apply analytical models and solve complex business challenges.
 - Managing assignments and project submissions within strict deadlines.
 - Documenting and presenting findings to improve data-driven strategies.
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Mentor and Trainer - *Mindhub (June 2024 - Jan 2025)*

- Taught programming and digital skills to children and young adults.
 - Designed and delivered hands-on coding workshops on Python, JavaScript, and web development.
 - Mentored students on building personal projects and participating in coding competitions.
 - Helped students improve problem-solving and critical thinking skills.
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Data Analyst - *True Pesa (June 2023 - September 2023)*

- Collected, cleaned, and analyzed financial transaction data to identify trends and insights.
 - Developed interactive dashboards using Power BI and Tableau for real-time performance monitoring.
 - Performed data validation and ensured data accuracy across multiple platforms.
 - Identified fraud patterns and anomalies using machine learning models, reducing fraudulent transactions by 20%.
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Community Manager and Global Ambassador - *Alliance4AI (September 2022 - December 2024)*

- Managed AI community growth across Africa, increasing member engagement by 55%.

- Organized over 20+ AI-focused events and training sessions, driving AI adoption and education.
 - Spearheaded partnerships with universities and tech hubs to enhance AI learning opportunities.
 - Provided mentorship and training to over 200+ students on AI, leadership, and ML applications.
 - Represented Alliance4AI at global AI summits and forums, advocating for AI for social impact.
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Chat Moderator - *Cloud Workers (2021 - 2023)*

- Managed and moderated chatrooms, including sensitive and adult content.
 - Ensured adherence to company guidelines and maintained a respectful environment.
 - Trained new moderators on chat moderation techniques and conflict resolution.
 - Recognized for maintaining high user engagement and platform compliance
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PROJECTS

Dira Farm - AI-Powered Web Application for Small-Scale Farmers (2025)

- Developed an AI-based potato disease diagnosis platform using TensorFlow and CNN models.
 - Built a backend API using FastAPI and integrated it with Django for the frontend interface.
 - Trained the AI model on a large dataset of potato leaves to classify diseases with over **90% accuracy**.
 - Provided treatment recommendations and connected farmers to nearby agrovet services.
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Swahili News Classification (Zindi Challenge) (2024)

- Classified 6,439 Swahili news articles into five categories using NLP techniques.
 - Applied text preprocessing (tokenization, lemmatization) and feature extraction (TF-IDF).
 - multiple models (Logistic Regression, SVM, XGBoost), achieving a high F1 score on test data.
 - Delivered a working classifier that improved content organization for the client.
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Task Management Component (COP Project) (2024)

- Designed and built a reusable task management component in Python.

- Ensured modular architecture, making the component compatible with various Python frameworks.
 - Delivered a comprehensive report including code structure, use cases, and implementation details.
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LEADERSHIP EXPERIENCE

Student ambassador Alliances4ai - *Kenyatta University Chapter (2022 - Present)*

- Spearheaded AI awareness and adoption initiatives across African universities, organizing technical workshops on AI, ML, and cloud computing.
 - Increased community engagement by 40% through strategic event planning and outreach.
 - Mentored over 300+ students on Data Science, Machine Learning, MLOps, and model development and deployment, fostering a strong AI talent pipeline.
 - Collaborated with industry leaders and AI experts to drive innovation and knowledge sharing within the African AI community.
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Co-Lead, Google Developer Student Club (GDSC) - *Kenyatta University (2022 - 2023)*

- Organized technical workshops on AI, ML, and cloud computing.
 - Increased club participation by 40% through strategic event planning and outreach.
 - Mentored over 50 students on Data Science, ML and MLOps and model development and deployment.
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Data Science Lead, Zindi (*2022 - 2023*)

- Organized and led data science hackathons and competitions.
 - Trained participants on model building, data visualization, and performance evaluation.
 - Organised events in collaboration with organisations such as Google and Microsoft on Sustainable AI, AI adoption, and AI for social good.
 - Helped the club achieve recognition for top performance in Zindi challenges.
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Secretary General, Engineering Students Association (ESA-KU) (2022 – 2023)

- Managed communication and logistics for the association's events and meetings.
 - Represented the association in inter-university forums.
 - Advocated for engineering students' academic and professional needs.
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RESEARCH EXPERIENCE

Nigeria Diaspora Investment Project (2023 – Present)

- Conducted in-depth research on remittance flows and diaspora investment in Nigeria and Kenya.
 - Analyzed government incentives and public investment opportunities.
 - Developed a public-facing data platform to track and visualize remittance impact.
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HONORS AND AWARDS

- **License** – Azure Responsible AI Workshop - Coach
 - **Best AI Project** – Kenyatta University AI Showcase (AISEC Eco Empower Summit 2025)
 - **Outstanding Leadership Award** – GDSC Kenyatta University (2023)
 - **Hackathon Winner** – Hack4Dev Regional Hackathon
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PROFESSIONAL MEMBERSHIPS

- Google Developer Group (GDG)
- Alliance4AI
- Zindi Africa
- Data Science Society Kenya

- Blacks in AI
 - Deep Learning Indaba
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REFERENCES

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