DAVID OGALO

Nairobi, Kenya ◇ (+254) 759172608 ◇ ogalodavid10@gmail.com ◇ LinkedIn

EDUCATION & CERTIFICATIONS

Strathmore University, Nairobi, Kenya
B.Sc Informatics & Computer Science
Graduated 2022, 3.5 GPA

ALX AiCE AI Career Essentials
AWS Certified Cloud Architect
IBM Data Engineering Professional Certificate

SKILLS

Languages	Python, Java, JavaScript (React, Vue.js, Node.js), C#, HTML/CSS
Database Technologies	MySQL, MS SQL Server, PostgreSQL, MongoDB, Cassandra, Oracle
Operating Systems	Windows, Linux
Tools	GitLab, Git, Jenkins, Docker, Kubernetes, Apache Spark, Apache Kafka
Additional Skills	Data Modeling & Architecture, Data Security, Database Management, Network Security, Project Management, Agile Methodologies

PROFESSIONAL EXPERIENCE

Data Center Engineer Jan 2023 - Current
Kenya Revenue Authority (KRA) *Nairobi, Kenya*

- Data Architecture Design and Implementation: Design and implement robust data architectures, encompassing conceptual, logical, and physical data models tailored to organizational objectives. Employ advanced techniques to optimize data storage solutions, ensuring scalability, reliability, and performance across diverse datasets.
- ETL Pipeline Development: Spearhead the development of end-to-end ETL pipelines, orchestrating efficient data extraction, transformation, and loading processes from disparate sources. Leverage a combination of programming languages such as Python and SQL, along with cloud-native technologies like Apache Spark, to streamline data workflows and enhance data quality.
- Advanced Data Security and Compliance: Implement robust security measures to protect sensitive data, utilizing encryption, access controls, and secure protocols. Conduct regular security audits and risk assessments to identify and mitigate vulnerabilities. Ensure compliance with industry standards and regulations such as GDPR, HIPAA, and CCPA. Develop and enforce data security policies and procedures to safeguard organizational data assets.
- Data Loss Prevention: Develop and implement comprehensive DLP strategies to prevent unauthorized access, use, or transmission of sensitive data. Utilize advanced DLP tools and technologies to monitor, detect, and respond to potential data breaches. Establish policies and procedures for data handling and incident response, ensuring adherence to regulatory requirements and industry best practices. Conduct training sessions to raise awareness and educate employees on data protection protocols.

Software Developer Jan 2019 - Current
Freelancer *Nairobi, Kenya*

- Full-Stack Development: Proficient in developing both client-side and server-side logic, specializing in developing robust and scalable applications. Leverage Python, JavaScript frameworks, C# and HTML5/CSS to develop dynamic web-based applications while integrating databases, third-party libraries and APIs to extend the functionality of applications. Skilled in developing and consuming RESTful APIs, utilizing data formats such as JSON and XML as well as designing and building microservices and web services, ensuring interoperability.
- Security Implementation: Dedication to securing systems by implementing access restrictions techniques (incl. OAuth, Role-Based Access Control, Access Tokens), Adequate controls techniques (incl. Input Validation to prevent SQL injection or Cross-Site Scripting (XSS), Output Encoding, Data Encryption, Error handling and logging), Regular Security Audits and Penetration Testing, resulting in significant decrease in security incidents.
- DevOps and Version Control: Extensive experience in implementing and managing CI/CD pipelines to automate the build, test, and deployment processes, ensuring efficient and reliable software delivery. I utilize tools such as Git for version control and effective collaboration, VMware, Jenkins, Docker and Kubernetes to streamline

development workflows, enhance scalability, and maintain consistent environments across different stages of the software lifecycle. Additionally, I ensure code quality and security through automated testing and continuous monitoring, enabling rapid and safe delivery of high-quality software products.

IT Support Technician May 2022 - Aug 2022
International Livestock Research Institute (ILRI) *Nairobi, Kenya*

- Collaborated closely with cross-functional support teams to effectively escalate and resolve complex technical issues, ensuring minimal disruption to end-user operations and maximizing overall client satisfaction.
- Implemented proactive measures to optimize IT infrastructure, resulting in a 20% increase in system performance and strengthened cybersecurity protocols. Utilized virtual assistance tools and innovative techniques to streamline processes and bolster system resilience.
- Actively participated in system upgrades and maintenance activities, gaining hands-on experience in configuring hardware, software installation, and troubleshooting network-related issues. Leveraged a range of diagnostic tools and methodologies to ensure seamless network operations.

Software Developer Intern Feb 2021 - May 2021
Centric Limited *Nairobi, Kenya*

- Contributed to the migration of legacy systems to AWS, implementing data migration strategies and leveraging AWS Database Migration Service (DMS), showcasing expertise in cloud architecture and data management.
- Contributed to the customization and integration of ERP solutions in businesses, particularly ERPNext and SAP S/4HANA, collaborating with cross-functional teams to streamline business processes and optimize system performance, demonstrating proficiency in enterprise software development and integration.
- Played a vital role in the implementation of Continuous Integration/Continuous Deployment (CI/CD) pipelines and containerization techniques, utilizing tools such as Docker and Jenkins to automate software delivery and deployment processes, showcasing a commitment to DevOps practices and software life-cycle management.

PROJECTS

1. Sentiment Analysis on Social Media Data. Conceptualized and developed a sentiment analysis model to quantify the positivity of tweets across different geographic regions.

Key Concepts: Data Handling and Pre-processing: Processed unstructured text data to handle missing values and duplicates. Utilized count vectorization, TF-IDF, and Doc2Vec to create meaningful features from raw text data. Used Matplotlib to visualize sentiment distribution across regions. Machine Learning Algorithims: Trained the model using supervised learning techniques on labeled tweet data and applied clustering methods to explore patterns in sentiment data, sourced from Kaggle. Natural Language Processing (NLP): Implemented tokenization, stemming, and lemmatization using NLTK for text Pre-Processing. Leveraged advanced models like Doc2Vec for feature extraction and utilized NLTK and Gensim for various NLP tasks. Model Evaluation and Validation: Assessed model performance using accuracy, precision, and recall. Conducted k-fold cross-validation to validate model stability.

Key Technologies: Python, NLTK(Natural Language Toolkit), Gensim, Matplotlib

2. ANPR Parking Management System. Led the design and implementation of an Automatic Number Plate Recognition (ANPR) system, utilizing deep learning algorithms for accurate license plate identification.

Key Concepts: Data Handling and Pre-processing: Utilized OpenCV for image pre-processing, addressing noise and artifacts to ensure clean input data and feature engineering to extract significant attributes from raw images. To enhance the system's performance, I used Optical Character Recognition (OCR) and advanced image processing methodologies to extract license plate characters in real-time. Employed tools like Matplotlib to visualize data distribution and pre-processing effects. Machine Learning Algorithms: Implemented supervised learning techniques using a dataset sourced from Kaggle.The model was trained and fine-tuned using neural network architectures. Used TensorFlow for model training and optimization. Applied advanced training techniques and hyper-parameter tuning to optimize performance. Model Evaluation and Validation; Evaluated model performance using accuracy and recall metrics. Employed cross-validation techniques to ensure robustness and reliability.

Key Technologies: Python, OCR, TensorFlow, OpenCV, Matplotlib