

# Allan Andrew Situma

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## CAREER SUMMARY

I am a skilled Data & Software Engineer with over 10 years of professional experience, specializing in software and data engineering. My expertise covers a broad spectrum of domains, including data management, web analytics, BI development, front-end architecture, and API development. I have a deep understanding of Big Data mining and management, cloud infrastructure setup, digital transformations, and data warehouse management.

Throughout my career, I have worked with leading cloud platforms such as Google Cloud Platform, Azure, and AWS, where I have designed and implemented robust cloud architectures. Additionally, my technical toolkit includes proficiency in a diverse range of technologies, including React.js, Python, R, Spark, Scala, SQL, AWS, Hadoop, ETL, Power BI, Tableau, Google Analytics, and Google Tag Manager.

My comprehensive skill set enables me to tackle complex projects across various industries, from fintech to agriculture to e-commerce. I have a proven track record of delivering effective solutions collaboratively with teams, driving innovation and achieving business objectives. I am passionate about leveraging technology to solve real-world challenges and thrive in dynamic environments where I can continuously learn and grow.

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## SKILLS AND STRENGTHS

- **Programming and Cloud Technology:** Proficient in SQL, Python, Scala, Javascript, React js, AWS, GCP, Azure
- **Frontend Development:** Experience in React.js and React Native for building web and mobile applications.
- **Data Engineering:** Skilled in Apache Spark, Apache Hadoop, HiveQL, and AWS services like Glue and Terraform.
- **Data Analysis, Modelling and BI:** Familiarity with data analytics tools such as Google Analytics, Google BigQuery, and building data marts using PostgreSQL and DBT.
- **Web Analytics:** Experienced in implementing and maintaining web analytics solutions using Google Analytics and Google Tag Manager.
- **Marketing Technology:** Knowledgeable in digital marketing tools and platforms including Google AdWords, social media advertising, and marketing analytics.
- **Cross-functional Collaboration:** Demonstrated ability to collaborate with cross-functional teams including product managers, designers, and developers to drive business value through data-driven insights.
- **Automation and Scripting:** Experience in developing automation scripts for tasks like migrating data infrastructure, templating Terraform scripts, and automating ETL processes.

- **Problem Solving and Innovation:** Proven track record of solving complex analytics infrastructure problems and prototyping new tools and solutions to enhance data analytics capabilities.
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## PROFESSIONAL ACCOMPLISHMENTS

1. **Apollo Agriculture:** Implemented an end-to-end data platform enabling precise tracking of the farmer engagement funnel, from initial sign-up to loan repayment. By meticulously capturing and analyzing user interactions at every stage of the process, the platform provided invaluable insights into user behavior, pain points, and conversion rates. This comprehensive understanding empowered Apollo Agriculture to optimize their customer journey, streamline operations, and enhance user experience. As a result, Apollo Agriculture witnessed improved acquisition and retention rates, increased loan repayment efficiency, and ultimately, greater financial sustainability for both the organization and the farmers it serves.
  2. **Farming Tech Technologies:** Spearheaded the development of a customized data platform tailored to the needs of modern farming technologies. This platform facilitated seamless data integration from various sensors and IoT devices, enabling real-time monitoring and analysis of agricultural processes. The implementation of this platform led to enhanced precision farming techniques, improved resource allocation, and ultimately, higher yields for farmers leveraging advanced farming technologies.
  3. **E-commerce Clients for Alternative Agency:** Engineered a sophisticated data platform for e-commerce clients, enabling precise ad tracking and performance analysis. By leveraging advanced analytics and tracking capabilities, the platform provided actionable insights into customer behavior, campaign effectiveness, and ROI optimization. As a result, e-commerce clients experienced improved ad targeting, increased conversion rates, and greater return on advertising spend (ROAS), driving significant revenue growth and market expansion.
  4. **Ubapesa for Credit Scoring and Reporting:** Architected a robust data platform for Ubapesa, facilitating accurate credit scoring and comprehensive reporting capabilities. Leveraging advanced data analytics and machine learning algorithms, the platform enabled precise risk assessment and credit decision-making processes. This implementation significantly improved Ubapesa's ability to evaluate creditworthiness, mitigate risks, and provide financial services to underserved populations, ultimately fostering economic empowerment and financial inclusion.
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## WORK HISTORY

**August 2023 - March 2024**

**Web Analytics Engineer**

**Kinship Partners Inc**

As a Web Analytics Engineer at Kinship, played a pivotal role in enhancing data infrastructure and driving business value through insightful analysis. Implemented and maintained web analytics solutions across multiple platforms, collaborating with cross-functional teams, and providing actionable insights to drive product improvements.

- Implemented and maintained web analytics solutions for various platforms, including a React Native mobile app, an Angular Dart web app, and a React website app
- Leveraged Google Analytics and Google Tag Manager to track user behavior and key metrics across all platforms, ensuring comprehensive data collection and analysis
- Collaborated closely with product managers to specify events from the UI, ensuring accurate tracking of user interactions and behaviors to inform product decisions
- Implemented event tracking and data layer enhancements to capture relevant data points for analysis, driving actionable insights for product optimizations
- Worked alongside the data analytics team to write SQL queries on BigQuery for advanced analysis and reporting, contributing to data-driven decision-making processes
- Led initiatives to implement advanced tracking solutions such as cross-domain tracking and enhanced eCommerce tracking, providing comprehensive insights into user behavior and driving business growth
- Developed custom JavaScript solutions to address specific tracking requirements and improve data accuracy, optimizing our tracking implementations
- Collaborated with the engineering team to implement data layer standards and ensure consistency in tracking implementations across platforms

**September 2021 - June 2023**

**Senior Data Engineer**

**Indeed.com**

As a software and data engineer, helped migrate Indeed's indexes, named data marts, from on-premises Hadoop to Amazon Web Services (AWS).

- Migrated 130 data mart critical indexes to AWS as part of the first phase of the project
- Achieved 50% Leila Indeed DSL index builders, 25% Python-based index builders, and 25% Scala-based index builders
- Developed automation for migrating Pig Latin index builders
- Created a script to automate the templating of Terraform scripts
- Architected a script to automate the migration of on-premises Hive tables to AWS Glue
- Refactored Spark scripts written in Java to fit an AWS migration
- Collaborated with stakeholders and owners to complete migrations

**September 2021 - September 2022**  
**Software Engineer | Frontend**  
**Apollo Agriculture**

Developed and maintained web applications using React.js and its ecosystem, including state management libraries like Redux or MobX and routing libraries like React Router. Contributed to front-end development by implementing user interfaces and UI interactions based on design specifications and wireframes. Wrote clean, efficient, and reusable code using HTML, CSS, and JavaScript.

- Developed components by creating and maintaining reusable React components used across different parts of the application
- Managed an app's components, handled events, and ensured code modularity
- Carried out state management by overseeing the application state using state management libraries like Redux and MobX
- Understood and implemented actions, reducers, and stores to manage complex application states effectively
- Wrote unit tests and performed debugging to ensure the stability, reliability, and performance of the application
- Identified and resolved performance bottlenecks in the application by optimizing rendering, reducing unnecessary re-renders, and improving data fetching and caching strategies
- Worked closely with designers, product managers, and other developers to gather requirements, provide technical insights, and ensure the successful delivery of high-quality software products
- Participated in code reviews to ensure code quality, readability, and adherence to best practices
- Documented code and maintained technical documentation for future reference
- Kept up with the latest trends, techniques, and best practices in React and web development
- Proactively sought opportunities to enhance skills and knowledge through self-learning and professional development
- Collaborated effectively within a team, communicating ideas, challenges, and progress to team members, and actively participating in team meetings and discussions
- Developed APIs with Scala

**August 2018 - September 2021**  
**BI and Analytics Engineer**  
**Apollo Agriculture**

Provided clean, tested, documented, and transformed data. Used Kimball-style data modeling techniques to provide data marts summarizing various business processes, allowing more business users to be comfortable with SQL. Prototyped new tools to solve analytics infrastructure problems, such as testing tools like Meltano for ETL, dbtvault (a Data Vault 2.0 framework built on top of dbt), Singer (an open-source tool for database replication), and Splitgraph for data ingestion and modeling.

- Performed version controlling, testing, and continuous integration of analytics codebase inside dbt
- Maintained data documentation, setting up dbt documentation on GitLab pages for the internal team
- Set up dbt, tests, production schemas, project layouts, and database credentials
- Set up CI/CD for the Ditto project, maintaining the GitLab CI file to take care of testing, debugging, and running dbt project and deploying dbt docks
- Monitored and maintained the ETL process using Elasticsearch

**June 2015 - June 2018**  
**Marketing Technology Manager**  
**Alternative Agency**

Coordinated and closely worked with the account management and business development team to come up with new digital products for current and new clients. Worked with account management teams to create media buying strategies and budgets. Implemented digital data collection and reporting strategies for different media buying campaigns.

- Managed and executed demand generation and digital sales campaigns for clients
  - Leveraged a combination of digital marketing channels such as social media, email marketing, search engine advertising, and content marketing
  - Conducted in-depth research on Customer Relationship Management (CRM), Data Management Platforms (DMP), and Customer Data Platforms (CDP) and implemented these solutions for clients
  - Managed eCommerce websites for esteemed clients and ensured the seamless functioning of their online stores, overseeing product listings, pricing, and inventory management
  - Worked closely with web developers and designers to enhance user experiences, optimize checkout processes, and drive increased online sales
  - Championed the agency's digital transformation, implementing various productivity tools to streamline internal processes, boost team efficiency, deliver better client services, and enhance overall business performance
  - Applied data-driven insights to identify the most effective strategies for clients
  - Introduced Customer Data Platforms (CDPs) and Data Management Platforms (DMPs) to the agency's marketing strategies; these platforms enabled to deliver personalized and targeted marketing campaigns, resulting in improved customer experiences and increased ROI
  - Leveraged Google Analytics to gain valuable insights into website performance and user behavior
  - Managed digital advertising campaigns across various platforms, including Google Ads, social media platforms, and display networks
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## **EDUCATION**

**April 2024 - May 2024**

**Nvidia Deep Learning Institute**

**Accelerating End to End Data Science Workflow**

A course in GPU-accelerated Data Analytics and Science, offered by NVIDIA, introduces participants to cutting-edge technology through their Rapids.ai API. This course equips learners with the knowledge and skills to harness the power of GPUs for accelerating data analytics and scientific computations. Throughout the program, participants delve into various aspects of data analysis, including data preprocessing, manipulation, visualization, and modeling, leveraging the Rapids.ai API. By integrating GPU acceleration into data workflows, participants can achieve significant speedups in processing large datasets and complex computations. The course offers hands-on experience with Rapids.ai tools and libraries, enabling participants to apply GPU-accelerated techniques to real-world data science challenges. Upon completion, participants gain expertise in GPU-accelerated data analytics, positioning them for roles in data science, machine learning, artificial intelligence, and other related fields.

**January 2020 - March 2020**

**Google Africa Developer Scholarship**

**Google**

A Certificate in Google Cloud Technology is a professional credential that demonstrates expertise in utilizing Google Cloud Platform (GCP) services and solutions. This certification equips individuals with the skills needed to design, build, deploy, and manage applications and infrastructure on Google Cloud. Throughout the certification program, candidates learn about various GCP services, including computing, storage, databases, networking, machine learning, and security. They gain hands-on experience with cloud technologies through practical exercises and real-world projects. By obtaining a Certificate in Google Cloud Technology, individuals showcase their proficiency in leveraging cloud computing to drive innovation, scalability, and efficiency in businesses. This certification is highly valued in the technology industry, opening up opportunities for roles in cloud architecture, cloud engineering, DevOps, data analytics, and more.

**March 2010 - December 2014**

**Jomo Kenyatta University of Agriculture and Technology**

**Bachelor's degree • Bsc Financial Engineering**

A Bachelor of Science in Financial Engineering blends finance, mathematics, statistics, computer science, and economics to equip students with skills for solving complex financial problems. Through courses in finance, mathematics, statistics, computer science, economics, quantitative finance, and financial engineering, students learn about financial markets, instruments, modeling, and risk management. They acquire programming proficiency for data analysis and financial modeling, along with a strong mathematical foundation. Upon completion, graduates are prepared for careers in investment banking, asset management, risk management, quantitative analysis, and financial technology.

**March 2009 - December 2010**  
**Vision Institute of Professional Studies**  
**Certificate of Public Accountant**

A Certified Public Accountant (CPA) qualification is a professional credential that signifies expertise in accounting and financial management. CPAs are proficient in various areas, including financial accounting, managerial accounting, taxation, auditing, and regulatory compliance. They possess a deep understanding of accounting principles, financial reporting standards, and tax laws. CPA candidates typically undergo rigorous education and training, including coursework in accounting, business, and finance, as well as passing the CPA Exam and meeting specific experience requirements. CPAs play vital roles in businesses, providing financial advice, auditing financial statements, preparing tax returns, and ensuring compliance with regulatory standards. Overall, the CPA designation signifies a high level of competence and professionalism in the accounting profession.