Pius Dan Nyongesa

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PROFESSIONAL SUMMARY

Results-driven Software Engineer experienced in building scalable cloud-based platforms and deploying microservices architectures. Proficient in Azure, C#, Python, Javascript, Typescript, Kubernetes, and Docker. Skilled in streamlining processes, reducing time to market, and improving system performance. Effective communicator and problem-solver committed to delivering high-quality solutions.

EXPERIENCE

Microsoft   Nairobi, KE
Software Engineer   *May 2019 - Present*

- **Windows Compatibility Tooling**: Designed and built a platform to run automated tests on thousands of Windows applications daily in order to detect application compatibility issues. This system, built using a microservices architecture and deployed on Azure. The platfrom played a key role in reducing the time to ship Windows versions from 3 months to one month as Microsoft can now discover bugs faster.
- **Windows Compatibility Infrastructure**: Owned the deployment of code and environments to support detection of compatibility issues between Windows versions. Implemented an Infrastructure as Code solution to manage the deployment of code and environments. Implemented a zero-touch deployment for code and backing services on Azure. Defined SLAs and SLOs for the service. Built a monitoring solution to track the health of the service.
- **Azure Migration Tooling**: Built cloud tools to determine incompatibilities on on-prem servers when a customer is migrating their workloads to Azure. Built an automated deployment pipeline to deploy code and infrastructure components across multiple availability zones using a ringed approach. Implemented a Blue-Green deployment model to ensure zero downtime deployment.

Relevant Skills: Azure, C#, Powershell, Python, Distributed Systems, Microservices

Loanbee Limited   Nairobi, KE
Software Engineer   *Jun 2018 - May 2019*

- **Loanbee Lending Platform**: Built a lending platform that allowed customers to apply for loans and get instant approval. The platform was built on a microservices architecture and was deployed on a Kubernetes cluster.
- **Alternative credit scoring**: Deployed an alternative credit scoring model to detemine loan eligibility for customers based on their mobile money transactions. The model reduced the default rates by 15%.
- **Observability**: Built and deployed an elasctic search, kibana and logstash stack monitoring system that allowed for realtime monitoring of application running across multiple Virtual machine instances.
- **Service Resilience**: Enhanced the security and reliability of servcies running on Kubernetes cluster by deploying an Istion service mesh. This architecture allowed us to use mutual TLS to enhance security. The service mesh also allowed for error handling and retries in case of service failures enabling us build a fault tolerant microsoervices architecture.

Relevant Skills: Python, Kubernetes, Google Cloud, Elixir, Docker, Istio, Elastic Search, Kibana, Logstash, Microservices

AfrikasTalking LTD   Nairobi, KE
Software Developer   *Apr 2017 - Jun 2018*

- **Dodore Training Platform**: Consulted for Dodore Agriculture, a startup based in Nairobi to build a SMS based platform that allowed the company to rollout educational campaigns to over 10,000 farmers on their portfolio.
- **Tuwajibike Mashinani Public Participation Portal**: Consulted for Mbaika Connect to build a public participation portal that allowed citizens to give feedback on various issues directly to the leaders using a USSD application.
- **Cash value Solutions Event Ticketing System**: Consulted for Cash Value Sulutions to build an event ticketing system that allowed event organizers to sell tickets to their events through ussd. The system also had a billing module to allow customers purchase airtime and pay utility bills.
- **Software Developer Intern**: Developed product demos to Guide developers when integrating Africa's Talking Voice, USSD, Airtime and SMS APIs.

Relevant Skills: Python, Flask, Django, USSD, SMS, Voice, Airtime, API Integration, Microservices

PROJECTS

- **Robopal AI**: Built a WhatsApp based bot that uses LLMs to democratizing access to education for over 10,000 learners accross Africa. https://robopal.co
- **ChangaChanga**: Led a team of 5 to design and build a platform Web Application (React Js, Python + Fast API), IOS Application and Android Application (Flutter) and CRM portal (React Js) to simplify making financial transactions. The system used Visa 3D technology and was fully integrated into the core banking system of kenya major bank. www.changachanga.co.ke
- **Kapu WhatsApp Shopping Cart**: Consulted for Kapu an online retailer in Africa to build the first WhatsApp based shopping Experience in Africa using Typescript and Node Js. kapuafrica.com
- **USSD Tutorial**: Step by step Tutorial to guide learners in developing USSD applications. https://github.com/piusdan/USSD-Python-Demo
- **USSD SDK**: Open sourced an SDK to build reliable and fast USSD applications. https://github.com/piusdan/flask-ussd-flow
- **Kubernetes Security Publication**: Wrote a publication on how to secure Kubernetes Clusters on Cloud. https://piusdan.medium.com/kubernetes-security-faf59ac121e1
- **Speaker at GDG Fest Nairobi**: GDG is a commmunity of google cloud experts in Africa. I presented my learnings on reliabily running a Kubernetes cluster on cloud.
- **Speaker at Pycon**: Pycon is the largest conference on pyhton held annually accross all geogrphic zones. I presented on using GRPC to build fast and reliable microservices was well received.
- **Founder - Silicon Blaze**: During my first and second year of campus, I founded Silicon blaze and organization aimed at democratising access to Computer Science for young learners around Kenya. I led a team of 20 volunteers to teach over 1000 students in 10 schools.

EDUCATION

- **Jomo Kenyatta University of Science and Technology**
  BSc. Computer Science