

# Pius Dan Nyongesa

## Senior Backend Engineer / Platform Engineer

📍 Nairobi, Kenya    ✉️ npiusdan@gmail.com    ☎️ +254 703 554 404  
🌐 github.com/piusdan    🔗 linkedin.com/in/piusdannnyongesa

### PROFESSIONAL SUMMARY

---

Senior Backend Engineer with 7+ years of experience designing, building, and operating high-scale, cloud-native backend systems and APIs. Proven track record of owning production microservices, data platforms, CI/CD pipelines, and distributed systems used by millions of users globally. Deep expertise in .NET (C#), Azure, event-driven architecture, and microservices. Strong focus on performance, reliability, security, and long-term maintainability.

### CORE BACKEND & PLATFORM SKILLS

---

**Languages:** C#, .NET, Python, TypeScript  
**Backend:** REST APIs, Microservices, Event-Driven Architecture  
**Databases:** SQL, NoSQL (Cosmos DB), Data Pipelines  
**Cloud & Infra:** Azure, Kubernetes, Docker, GCP  
**Messaging:** Azure Service Bus, Event Grid, MassTransit  
**DevOps:** CI/CD, Azure DevOps, Git, Infrastructure as Code (Bicep)  
**Observability:** Monitoring, Logging, Tracing, ELK Stack  
**Architecture:** Distributed Systems, Fault Tolerance, Resilience, Scalability

### PROFESSIONAL EXPERIENCE

---

- **Microsoft** Nairobi, Kenya  
*Software Engineer (Backend & Platform)* May 2019 – Present
  - Designed and built high-scale backend microservices in C#/.NET supporting AI-powered Copilot workflows across Microsoft business units.
  - Built event-driven data ingestion and processing pipelines integrating LLMs with internal knowledge bases, serving millions of requests per day.
  - Developed and maintained REST APIs and backend orchestration services for automation and data processing.
  - Owned backend architecture for automated testing infrastructure running thousands of Windows application compatibility tests daily.
  - Built self-healing distributed systems with automated failure detection, rollback, and recovery.
  - Designed ring-based CI/CD deployments across multiple Azure regions with zero-downtime releases.
  - Implemented system observability, monitoring, and alerting to ensure high availability and performance.
  - Led architecture discussions, technical design reviews, and mentored junior engineers.

**Tech Stack:** C#, .NET, Azure Functions, Service Bus, Event Grid, Cosmos DB, MassTransit, Azure DevOps, Bicep
- **Loanbee Limited** Nairobi, Kenya  
*Software Engineer (Backend)* Jun 2018 – May 2019
  - Built a cloud-native fintech lending platform using microservices architecture deployed on Kubernetes.
  - Designed backend services for loan origination, credit scoring, and payments processing.
  - Integrated mobile money transaction data into alternative credit scoring models, reducing default rates by 15%.
  - Built real-time observability platform using Elasticsearch, Kibana, and Logstash.
  - Implemented service resilience using Istio service mesh with mTLS, retries, and fault tolerance.

**Tech Stack:** Python, Kubernetes, Docker, Istio, GCP, ELK Stack, Microservices
- **Africa's Talking** Nairobi, Kenya  
*Software Developer* Apr 2017 – Jun 2018

- Built backend APIs for USSD, SMS, billing, and event ticketing platforms.
- Developed high-volume messaging systems serving 10,000+ users.
- Integrated telecom APIs for payments, airtime, and messaging.
- Built public participation and civic engagement platforms using USSD and SMS.

**Tech Stack:** Python, Flask, Django, USSD, SMS, API Integrations

## SELECTED SYSTEMS & PRODUCTS

---

- **Copilot AI Platform (Microsoft):** Backend data ingestion and orchestration layer for enterprise AI workflows.
- **Loanbee Lending Platform:** Fintech credit and payments backend serving thousands of borrowers.
- **RoboPal AI:** WhatsApp-based AI education platform serving 10,000+ learners across Africa. [robopal.co](http://robopal.co)
- **ChangaChanga:** Multi-channel fintech payments platform integrated with Visa 3D and core banking systems. [changachanga.co.ke](http://changachanga.co.ke)
- **Kapu WhatsApp Shopping:** WhatsApp commerce backend driving 10% weekly GMV growth. [kapuafrica.com](http://kapuafrica.com)

## BACKEND ARCHITECTURE & SYSTEM DESIGN

---

- **Event Processing:** Designed distributed backend systems processing millions of events per day.
- **Fault Tolerance:** Built fault-tolerant microservices using retries, circuit breakers, and automated recovery.
- **Zero-Downtime Deployments:** Implemented zero-downtime deployments with ring-based rollout strategies.
- **Event-Driven Pipelines:** Designed scalable event-driven pipelines for AI and fintech platforms.
- **Security:** Built secure, cloud-native systems with identity, encryption, and service-to-service authentication.

## PUBLICATIONS & SPEAKING

---

- **Kubernetes Security Publication:** Securing Kubernetes Clusters in the Cloud. [medium.com](https://medium.com)
- **Speaker — GDG Nairobi:** Running reliable Kubernetes platforms at scale.
- **Speaker — PyCon:** Building fast microservices using gRPC.
- **USSD Tutorial:** Open-source USSD development guide. [github.com/piusdan/USSD-Python-Demo](https://github.com/piusdan/USSD-Python-Demo)

## EDUCATION

---

- **Jomo Kenyatta University of Science and Technology** 2015 – 2021  
*Bachelor of Science in Computer Science*

## LEADERSHIP & COMMUNITY

---

- **Founder — Silicon Blaze:** Founded a nonprofit teaching computer science to economically disadvantaged youth. Led 20 volunteers and trained 1,000+ students across Kenyan high schools. [siliconblazeblog.wordpress.com](http://siliconblazeblog.wordpress.com)

## LANGUAGES

---

English, Kiswahili