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Ryan Tatenda Emason

FULL-STACK SOFTWARE ENGINEER: SAAS PLATFORMS, PAYMENTS & DATA

Full-stack engineer with 5+ years building and shipping production web and mobile software for regulated, multi-organisation environments. I work across React and TypeScript on the web and Flutter on mobile, with PHP (Laravel), Python and Node.js on the backend and PostgreSQL and MySQL underneath, deploying containerised services with Docker to cloud and self-managed Linux infrastructure. Recent work spans payment gateway integration, subscription and access-control systems, and POPIA-compliant handling of sensitive records. I learn unfamiliar regulated domains quickly, a habit from a biotechnology background and five years building for mining, healthcare and industrial clients.

EXPERIENCE

Full-Stack Developer

Jan 2020 to Present

Kosi Connect (Pty) Ltd · eMalahleni, South Africa

Design, build and deploy full-stack web and mobile products end to end for clients across mining, healthcare and industrial sectors, owning architecture, delivery and production support.

- Build frontend interfaces in React.js, TypeScript (Angular) and Flutter, with a focus on interfaces non-technical users in the field can operate without training.
- Design and build RESTful APIs and backend services in Python, Node.js and PHP, deployed on Azure Function Apps and self-managed Linux servers.
- Containerise services with Docker across a multi-project VPS environment, isolating deployments and simplifying rollout.
- Model and maintain PostgreSQL and MySQL schemas: designing migrations, indexing for query performance, and structuring data for multi-organisation access.
- Integrate third-party payment infrastructure, including Paystack subscription billing with server-side key handling and secure checkout flows.
- Build data collection, processing and analytics pipelines to support operational reporting and decision-making.
- Integrate IoT and embedded hardware (STM, Arduino, RFID, GPS/GSM) where products require a physical layer.

PROJECTS

VeriNote

verinote.co.za

Kosi Connect · Co-founder · Full-Stack Developer

Medical documentation verification platform that combats medical document fraud by issuing tamper-evident digital notes traceable to verified practitioners.

- React frontend and Node.js backend, containerised with Docker.
- Designed the database schema and the verification model underpinning document integrity.
- Built tiered access and subscription pricing for individual practitioners and practices.
- Authored the POPIA-compliant privacy policy and designed data handling around it, for a healthcare product holding sensitive personal information.
- Shipped to both the Apple App Store and Google Play.

Shayile Time

shayiletime.co.za

Big Eye Minerals and Energy · Full-Stack Developer

Workforce attendance, payroll and safety compliance system tracking work hours and machinery inspection data for mining operations.

- Implemented RFID-based clock-in/out on Android devices, recording attendance in real time.
- Built a Flutter field application, a PHP/MySQL backend on a Linux server, and a React.js marketing site.
- Structured the data model around organisations, sites, workers and shifts, with role-based access separating supervisors, payroll and management.
- Designed for safety-compliance and labour reporting requirements.

Fleet Tracking Platform

Kosi Connect · Full-Stack Developer · Embedded Developer

Vehicle tracking hardware and software platform delivering live location, trip history and speed data to web and mobile clients.

- Built a vehicle tracking device on an STM microcontroller with GPS and GSM modules.
- Designed the REST API and backend on Azure Function Apps with an Azure PostgreSQL Flexible Server database.
- Delivered web (Angular/TypeScript) and mobile (Flutter) clients consuming the API.

GetLocals

getlocals.co.za

Big Eye Minerals and Energy · Full-Stack Developer

Cross-platform mobile marketplace connecting mining and construction employers to local job seekers by geographic radius and job type.

- Live on iOS and Android.
- Flutter frontend, PHP Laravel backend, MySQL database.
- Built location-based filtering, account management and job posting modules.

SKILLS

FRONTEND	React.js, TypeScript, Angular, HTML, CSS, JavaScript
MOBILE	Flutter (Dart), iOS and Android, App Store and Google Play releases
BACKEND	PHP (Laravel), Python, Node.js, REST API design, Azure Function Apps
DATABASES	PostgreSQL, Schema design, Migrations, Query optimisation, MySQL, Firebase
INFRASTRUCTURE	Docker, Azure, Linux VPS, Git, GitHub
PAYMENTS	Paystack, Subscription billing, Card and EFT flows
DATA & COMPLIANCE	Analytics pipelines, Machine learning, POPIA-aligned data handling
EMBEDDED & IOT	STM microcontrollers, Arduino, RFID, GPS/GSM

EDUCATION

BSc (Honours) Data Science

Completing November 2026

Eduvos · Midrand, South Africa

BSc Biotechnology

Eduvos · Midrand, South Africa

REFERENCES

Available on request.