

Douglas David Bett

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SUMMARY

Senior Full-Stack Mobile Developer with over 5 years of experience architecting, developing, and deploying scalable software solutions for enterprise and commercial clients. I specialise in solving complex technical challenges while building maintainable systems designed for future growth and adaptability.

EXPERIENCE

Contract Flutter Developer

Beakon.com Inc(USA)

May 2024 - Present (8 months), Remote

- Developed threat-detection mobile applications for commercial clients using Flutter, enabling real-time notifications about security incidents and environmental threats.
- Delivered cross-platform solutions targeting critical infrastructure and asset protection.
- Transformed Figma designs into fully functional Flutter prototypes, ensuring pixel-perfect implementation while maintaining optimal performance across iOS and Android platforms.
- Collaborated with design teams to validate user experience flows.
- Engineered background geolocation tracking and push notification systems to monitor and alert users about proximity-based threats.
- Implemented battery-optimized location services ensuring continuous protection without compromising device performance.
- Established automated deployment workflows targeting TestFlight, Firebase App Distribution, and Google Play Store.
- Streamlined release processes reducing deployment time and ensuring consistent app delivery across multiple distribution channels.
- Integrated Sentry for comprehensive error tracking and crash reporting, enabling proactive issue resolution.
- Implemented robust testing frameworks including unit and integration tests to maintain high code quality and ensure reliable threat detection functionality.
- Leveraged Shorebird for over-the-air code updates, enabling rapid bug fixes and feature deployments without requiring app store approval processes.
- This streamlined approach reduced critical issue resolution time and improved user experience through seamless updates.

Fullstack Flutter Developer & Consultant

Innostrategies (Pty) Ltd

August 2022 - December 2024 : (2 years 10 months), Remote

- Designed and deployed gRPC + REST APIs in Dart on Google Cloud Platform, using PostgreSQL for structured data and Redis for real-time caching.
- Containerized with Docker and deployed via Cloud Run, with Google Cloud Storage handling file uploads.
- Ensured reliability through comprehensive testing (test package) including unit/integration tests for all endpoints.
- Built Flutter Web applications for thousands of users using Riverpod for state management.
- Integrated backend APIs with robust error handling and implemented Firebase Auth for seamless social logins.
- Validated UI/UX with flutter_test widget/integration tests.
- Engineered custom RBAC (Role-Based Access Control) layered with Firebase Auth, enabling granular permissions for students/enterprise users.
- Secured APIs through JWT validation and OAuth2 flows, with penetration tests verifying safeguards.
- Integrated LLMs (OpenAI/Gemini) into applications and built WhatsApp Business API solutions.
- Implemented output validation tests to ensure AI response quality.
- Established GitHub Actions pipelines running backend (test) and frontend (flutter_test) suites pre-deployment.
- Configured Cloud Run as entry points to our services for zero-downtime updates serving high-traffic workloads. This enabled automatic increase or decrease of containers serving our clients depending on the size of the traffic.

Lead Mobile Application Developer(Android & iOS)

Crop Nutrition Laboratories

May 2019 - Feb 2023 (3 years 9 months)

- Led end-to-end delivery of two Flutter applications for laboratory service sales and management, digitizing agricultural testing workflows for Cropnuts across Africa.
- Collaborated with leadership (CTO, PM, Managers), fellow developers & field agents to design and implement robust infrastructure supporting tens of thousands of users in low-bandwidth regions.
- Partnered with designers (Figma/AdobeXD) to create intuitive interfaces and conduct usability testing, significantly boosting engagement and retention.
- Engineered offline data synchronization for areas with poor connectivity, driving substantial sales growth for field agents and laboratories.
- Implemented comprehensive testing (unit/ integration) with GitHub Actions, slashing deployment time by 40% via automated workflows.
- Built background push notification systems for timely service updates, increasing user retention & synchronization of offline data to our servers.
- Seamlessly integrated REST APIs and commercial services (payment, analytics) to expand app functionality.

Full Stack Mobile Developer

Avocado Society of Kenya (ASK)

November 2020 - March 2021

- Spearheaded the end-to-end design and deployment of a Flutter-based farmer CRM app on Google Play Store, enabling streamlined registration of avocado growers across Kenya.
- The solution drove membership growth to over 10,000 farmers, optimizing data collection and field operations.
- Engineered a scalable backend using Python, gRPC, and PostgreSQL to manage farmer data, authentication, and integrations.
- Containerized services via Docker and deployed on Google Cloud for high availability, reducing latency by 40%.
- Developed an SMS/email messaging hub leveraging Africa's Talking API, allowing stakeholders to broadcast notifications, track user engagement, and segment farmers for targeted service promotions enabling more farmer engagements through personalized outreach.
- Built an admin dashboard empowering ASK staff to send/receive SMS, monitor user activity, and flag high-priority farmers.
- Implemented comprehensive unit/integration tests for Flutter (frontend) and Python (backend), ensuring 99.8% system reliability and seamless data synchronization from the frontend to the backend.

PROJECTS

Community Watch

Citizen Watch · communitywatch.pages.dev/

- CommunityWatch is an app to enable community members to crowd source which issues they're facing as a community.
- It uses geolocation to group issues by region.
- This enables leaders at various geographic regions e.g county, constituency & ward to see what issues their people are facing and prioritize to fix them.

gRPC Dart Docs

grpc-dart-docs.pages.dev/

- A set of guides to enable developers to learn quickly how they can use gRPC and Dart to create web servers with ease.

EDUCATION

Geographic Information Systems

The Technical University of Kenya · Nairobi, Kenya · 2019

SKILLS

Dart, Python, Go, JavaScript, Java

Domain Driven Design, Clean Architecture, Automated Testing

Flutter, gRPC, Django, FastAPI, Flask, Android

Github Actions, & CodeMagic for Flutter CI/CD, Patrol

Firebase, SQLite, PostgreSQL, MongoDB

Geographic data collection, mapping, analysis & Visualization

Docker, Docker Swarm, EnvoyProxy

Google Cloud, DigitalOcean

Languages
