

SELECTED TECHNICAL EXPERIENCE / JONATHAN DU PLESSIS

Twelve solutions. Deep engineering.

End-to-end design, development and deployment.

Functionality, architecture and controls—project by project.



09 PLATFORMS 03 PUBLIC WEBSITES

PORTFOLIO GUIDE

Experience, project by project.

Twelve solutions from Jono's October 2026 portfolio, serving organisations in South Africa and across Southern and East Africa.

01	Human Capital	Page 03
03	Property Marketing Website	Page 05
05	Asset Management Portal	Page 07
07	Architecture Portfolio Website	Page 09
09	Loan Management System	Page 11
11	Capital Management	Page 13

02	Rent-To-Own Platform	Page 04
04	Investment Portal	Page 06
06	IT Service Management Helpdesk	Page 08
08	Recipe Website	Page 10
10	Enterprise Administration Review for M365	Page 12
12	Whistleblower Reporting Portal	Page 14

Engineering philosophy

Security by design · Reproducible environments · Controlled, traceable releases · Auditability and data integrity · Configuration over code · Responsible AI · Performance and accessibility.

Clients are described by sector and live application links are omitted. Each case has its own stack and controls. Selected historical experience is attributed to Jonathan du Plessis; it does not assert that every project was a Disisit corporate contract. No measured commercial outcomes are inferred.

WEB-BASED PLATFORM SOLUTION · MULTI-TENANT SAAS / 2021-2026

Human Capital

A production HCM platform designed, built and deployed end to end. Employees and managers use a self-service application; operators manage tenants, licensing and settings in a separate portal. Delivery included live-data migration from a predecessor SQL Server system.

Business functionality

- Staff profiles, bulk loading and data-quality checks, with onboarding, offboarding and probation-review workflows.
- Configurable leave policies and approvals, with ledger-based accrual, rollover and expiry.
- Performance-review cycles, reusable review templates and personal development plans.
- Increase, bonus and 13th-cheque calculations, including a Remuneration Committee approval stage.
- Scheduled and event-driven workflows, task queues, templated email and branded PDF documents.
- AI-assisted review and pay-proposal scoring; an MCP assistant answers questions using permitted live HR data.
- Licence tiers cap users; add-on licences enable modules separately for each client.

Architecture & controls

- Separate identity realms for clients and administrators, with Entra ID and Google single sign-on integration.
- Every database read and write enforces module roles, optionally scoped to a company.
- A database per tenant; organisation selection is checked against the signed token on every request.
- 256-bit API tokens are stored only as bcrypt hashes.
- Secrets use AES-256-GCM; the master key stays outside the database and is never returned by the admin API.
- Read-only, allowlisted MCP tools use OAuth token exchange and the same audit trail; identity numbers, birth dates, contact details and leave comments are withheld.

Technology stack

Vue / Vuetify · C# / .NET API; Node.js and .NET microservices · PostgreSQL · Keycloak / OpenID Connect · Model Context Protocol · Azure App Service, PostgreSQL and Blob Storage · Google Cloud Run, Cloud SQL and Cloud Storage

Organisations managing people, leave, performance and remuneration through a shared commercial platform. · Selected experience from Jonathan du Plessis's October 2026 portfolio.

Rent-To-Own Platform

A secure browser-based system connecting first enquiry to monthly collections. Staff manage prospects, property units, agreements, repayment schedules and payments in one system of record, with distinct rules for rent-to-own and straight-rental products.

Business functionality

- Staff and shared-inbox lead capture, scoring, assignment, follow-ups, duplicate merging and a viewings calendar.
- Document-led pre-vetting, expiry tracking, recorded approval or decline reasons, and deposit capture against payment evidence.
- Rent-to-own schedules covering deposits, step-up interest, monthly principal and outstanding balances.
- Rental escalations, renewals, transfers and month-to-month terms.
- Instalments tracked as pending, paid, overdue or waived, with bulk payment marking and rental-credit statements.
- Interactive estate maps, occupancy and unit status, development phases, blocks, unit types and pricing matrices.
- Renewal reminders and day-end reports; interest-rate history, contract templates, bulk unit creation and client imports; PDF contracts, statements and Excel exports.

Architecture & controls

- Signed tokens are verified on every API call; only staff on an approved list can access the system.
- Per-module permissions distinguish no access, read, write and administration; inactivity sign-out occurs after two hours.
- HTTPS, HSTS, security headers, restricted origins and separate general, upload and admin rate limits.
- File type and size checks, private storage under random names, and read-only download links expiring after 60 minutes.
- Identity numbers, bank and contact details are masked in logs; email-integration tokens use AES-256-GCM encryption.

Technology stack

React · Node.js / Express REST API · PostgreSQL · Keycloak / OpenID Connect · Shared email-inbox integration · Azure App Service, PostgreSQL and Blob Storage

A residential property business offering both rent-to-own agreements and conventional rental housing. · Selected experience from Jonathan du Plessis's October 2026 portfolio.

MARKETING WEBSITE · SERVER-RENDERED / 2026

Property Marketing Website

A public website explaining a rental agreement with a path to ownership in plain language. Development information, decision tools and enquiry journeys connect interested visitors with the sales team. Listing pages are prepared for a future live unit-inventory feed.

Business functionality

- Development showcase with unit types, interior galleries and register-interest or book-a-viewing forms.
- Rent-versus-rent-to-own cost calculator, a model explainer and practical frequently asked questions.
- Contact, three-step feedback and newsletter forms, with enquiries and subscriptions emailed to sales.
- Full-screen photo gallery, WhatsApp contact and a click-to-load location map.
- Per-page titles, social-sharing metadata, structured data, a sitemap and permanent redirects from older campaign links.
- Rental and rent-to-own listing pages behind a unit-data integration, awaiting the live inventory feed.

Architecture & controls

- Every form submission is validated server-side against a strict schema, independently of browser checks.
- Per-visitor endpoint rate limits and input filtering protect forms against abuse and email-header injection.
- Explicit consent is required before submitting personal details; personal data is excluded from logs.
- API keys remain server-side, and the inventory client refuses to transmit its key over plain HTTP.
- No analytics trackers; YouTube uses privacy mode and the map loads only when a visitor chooses it.

Technology stack

Nuxt / TypeScript; server-rendered · Tailwind CSS · Node.js server routes · Unit inventory integration · WhatsApp, YouTube privacy mode and maps · Azure App Service

A Southern African rent-to-own housing developer marketing its flagship residential development. · Selected experience from Jonathan du Plessis's October 2026 portfolio.

WEB-BASED PLATFORM SOLUTION / 2025-2026

Investment Portal

A secure shared workspace replacing spreadsheet workflows for mandate compliance, portfolio analytics, fixed-income reporting and market intelligence. Holdings, mandate rules, market feeds and reporting are brought into one system, with review and sign-off built into fund-performance reconciliation.

Business functionality

- PDF and Excel holdings imports, with AI extraction of mandate rules from scanned agreements.
- Automated mandate-limit checks and portfolio allocation, concentration, maturity, yield and liquidity views.
- Issuer normalisation, historical analysis and what-if trade simulation with PDF output.
- Country and consolidated fixed-income dashboards, yield curves, reinvestment schedules, benchmark spreads and indicative regulatory-limit monitoring.
- Fund returns rebuilt from monthly holdings and reconciled to published figures through review and sign-off.
- Client-ready look-through allocation reports by geography and asset class.
- Regional news and official central-bank rates, with an AI-written market brief published twice daily.

Architecture & controls

- Company-domain sign-up and administrator approval; approval is checked server-side on every request.
- Admin, member and back-office roles; uploads, mandate changes and user administration are admin-only.
- Passwords use script with individual salts and constant-time comparison.
- Signed seven-day sessions use HttpOnly, SameSite cookies, marked Secure over HTTPS.
- HSTS, security headers, restricted production CORS, rate limits, 50 MB upload caps and non-revealing errors.
- Secrets remain in environment configuration; request logs omit query strings.

Technology stack

React / TypeScript / Vite · Node.js / Express API · PostgreSQL · Application-managed accounts · Private Azure AI Foundry deployment · News, FX, central-bank and PDF / Excel integrations · Azure App Service, PostgreSQL and Blob Storage

Investment, compliance and back-office teams at a pan-African asset manager covering Southern and East African markets. · Selected experience from Jonathan du Plessis's October 2026 portfolio.

WEB-BASED PLATFORM SOLUTION / 2023-2026

Asset Management Portal

An investment-account platform connecting digital investor onboarding, KYC review, staged approvals and dealing. Investors use a self-service portal; staff work in a separate application. Fund and transaction information synchronises automatically from the group's fund-administration systems.

Business functionality

- Retail, Joint and Corporate accounts, including minors, guardians, attorneys, directors and beneficial owners.
- Document-based KYC governed by regional requirements that administrators can change without a code release.
- Multi-stage review with risk flags, comments and requests for changes.
- Subscribe, switch and redeem instructions, staff order-review queues and company-specific dealing cut-offs.
- Investor portfolio and transaction views supplied by scheduled fund-administration synchronisations.
- In-app, real-time and branded email notifications; reference-data, rules and staff-access administration.

Architecture & controls

- Keycloak MFA supports an authenticator application or emailed code.
- Session tokens are held in HttpOnly cookies, with CSRF double-submit protection.
- API permissions apply to every endpoint; company-level row scoping fails closed.
- Four-eye controls prevent linked reviewers approving an account or approving it at two stages.
- Correlation IDs, request auditing, rate limits, strict CORS allowlists and schema validation.
- Fund connectors read sources read-only, write only their owned columns and redact personal information from error logs.

Technology stack

Angular / TypeScript · NestJS / TypeScript API; Prisma · PostgreSQL · Keycloak single sign-on and MFA · Python fund-administration connectors · Azure App Service, PostgreSQL and Blob Storage

A pan-African asset management group operating multiple management companies across regions. · Selected experience from Jonathan du Plessis's October 2026 portfolio.

WEB-BASED PLATFORM SOLUTION · MULTI-TENANT / 2026

IT Service Management Helpdesk

A production service-management platform replacing email-driven support with accountable ticket ownership, business-hours service levels and change controls. Each business unit operates an isolated instance with its own branding, mailbox and reference data; users receive a view appropriate to their role.

Business functionality

- Web and mailbox ticket capture, threaded conversations and automatic duty-roster assignment.
- Business-hours SLAs with pause handling, early warnings and automatic escalation.
- Admin, supervisor, support, end-user and external-vendor roles with scoped views.
- Deployment calendars, release gating, defect management and hotfix tracking.
- AI classification, triage, drafted replies, ticket summaries and plain-language analytics.
- Custom dashboards, self-service charts and pivot tables, with PDF and Excel export.

Architecture & controls

- Entra ID tokens are verified against Microsoft's signing keys; sessions expire after eight hours.
- Every API call checks roles; end users and vendors see only their own tickets.
- PostgreSQL row-level security separates instances; requests without a tenant receive no data.
- Database traffic is encrypted in transit and stored credentials are encrypted at rest.
- Inbound email HTML is filtered through a strict allowlist to block script injection.
- Status changes, assignments and replies are audited; AI runs server-side with per-user opt-in.

Technology stack

React · Python / FastAPI · PostgreSQL · Microsoft Entra ID · Email-mailbox integration · Server-side large language model integration · Azure Static Web Apps, App Service and PostgreSQL

A pan-African financial services group supporting staff, support teams and external vendors in several countries. · Selected experience from Jonathan du Plessis's October 2026 portfolio.

Architecture Portfolio Website

A portfolio website presenting 25 completed projects across four categories and directing visitors towards enquiries. Static delivery replaces the former WordPress site, with build-validated content, optimised galleries and a hosted enquiry service instead of an application server or database.

Business functionality

- Project galleries with full-screen, zoomable lightboxes and lazy-loaded, optimised photography.
- Contact enquiries delivered to the practice inbox, with Reply-To set to the enquirer.
- Home, practice philosophy, featured projects, services, About and a custom 404 page.
- Business and breadcrumb structured data, canonical URLs and social-sharing cards.
- Automatically generated sitemap and Google Search Console verification.
- Each project uses one Markdown file plus photographs, schema-checked during the build; responsive layouts include a dedicated mobile menu.

Architecture & controls

- No application server, database, admin login or plugins to operate or patch.
- HTTPS throughout, with Firebase-managed, automatically renewed certificates.
- GitHub authenticates to Google Cloud through Workload Identity Federation; no long-lived deployment keys are required.
- The pipeline has read-only code access; credentials use encrypted GitHub secrets and build-time injection.
- A honeypot filters contact-form bots; the email service accepts requests only from the site's domains.
- Dependencies are audited and vulnerable versions patched before release.

Technology stack

Astro · React and Tailwind CSS · Pre-built static HTML · Hosted email service · Google Search Console · Google Firebase Hosting / global CDN

A South African architectural practice based in Johannesburg, presenting work across retail, residential, medical and other sectors. · Selected experience from Jonathan du Plessis's October 2026 portfolio.

PUBLIC WEBSITE · STATIC SITE / 2026

Recipe Website

An automated migration into a fast, mobile-first static website. The rebuilt collection includes 150+ full recipes, 50+ accompaniment recipes, 10+ menus and 10+ cooking guides, plus a free eBook. Search works entirely in the visitor's browser.

Business functionality

- Instant search across recipes, guides and menus, with category filters and no search server.
- Recipe pages include servings, timings, oven settings and low-carbohydrate badges.
- Related-recipe links connect the collection; dedicated A4 layouts support printing recipes.
- Thirteen category pages include family favourites; menus link individual courses to their recipes.
- Structured recipe data supports Google rich results, alongside a sitemap and social-sharing previews.
- Responsive layouts, AA colour contrast and reduced-motion support accommodate everyday access across devices.

Architecture & controls

- No application server, database, logins or forms; the site does not collect user data.
- No third-party scripts, analytics or cookies; fonts are self-hosted.
- GitHub Actions uses federated Google Cloud identity without long-lived credentials in the repository or CI.
- Only tagged versions deploy, one at a time; releases remain traceable to their source.
- Environment files and credentials are excluded from Git and Docker images; HTTPS uses managed certificates.

Technology stack

Astro / TypeScript · React · Pre-built static HTML · Google Firebase Hosting / global CDN · GitHub Actions / Workload Identity Federation

A family-run recipe website requiring a ground-up rebuild and migration of its existing content. · Selected experience from Jonathan du Plessis's October 2026 portfolio.

Loan Management System

A full-lifecycle platform connecting customer applications to payouts and collections, with one staff back office. National Credit Act, FICA and POPIA-related requirements are reflected in workflows; configurable rules, approval stages and versioned schedules support the lending journey.

Business functionality

- Web and WhatsApp applications, quotes and affordability assessment from bank statements and payslips.
- Configurable credit rules with TransUnion credit and fraud checks.
- Workflow task queues, SLA tracking, role-based approvals and team dashboards.
- Batch disbursements, versioned repayment schedules, interest and fee accrual, rescheduling, settlements and refunds.
- DebiCheck mandates, arrears ageing and SACRRA bureau reporting.
- Approximately 25 report areas, including provisioning, GL mapping and new-business value, with finance dashboards and scheduled Excel delivery.
- Azure OpenAI document-review assistance; email, SMS and WhatsApp notifications; English and Afrikaans interfaces.

Architecture & controls

- Staff single sign-on is restricted to the company Entra tenant.
- Customer accounts offer optional two-factor authentication and lockout after five failed attempts.
- Database-held permissions cover seven staff roles; payout batches require multiple approvers.
- Changes record the actor, records are soft-deleted, and logins track device and IP.
- HTTPS, Azure Key Vault-protected encryption keys, no source-control secrets, rate-limited sign-in and masked integration logs.

Technology stack

C# / Blazor / .NET · SQL Server / Entity Framework Core · Microsoft Entra ID · Elsa workflow engine · TransUnion, DebiCheck and SACRRA · Azure OpenAI; WhatsApp and SMS · Azure App Service / South Africa North; Application Insights



Before disbursement: payout batches require more than one approver.

A South African unsecured consumer-lending business managing origination, underwriting, servicing and collections. · Selected experience from Jonathan du Plessis's October 2026 portfolio.

Enterprise Administration Review for M365

An internal portal providing a filterable view of tenant information gathered daily through Microsoft Graph. Each synchronisation is retained as a snapshot, creating a historical record of changes in users, mailboxes, devices, groups, licences and cloud applications.

Business functionality

- Seven report areas: Users, User Overview, Mailboxes, Devices, Groups, Licences and Cloud Apps.
- User reporting includes enabled status, last sign-in, MFA and hybrid versus cloud-only identity; User Overview joins users to mailboxes.
- Cross-linked detail pages for individual users, devices, groups, licences and applications.
- Shared grids provide column filters, sorting, show/hide controls, density settings, pagination and CSV export.
- Daily Microsoft Graph pulls, administrator-only manual refresh and complete sync-run history.
- Administrator-curated friendly names for licence SKUs.

Architecture & controls

- MSAL uses Auth Code with PKCE; admin actions require the Entra Admin app role.
- API tokens must match signature, audience, tenant and user scope; CORS is origin-restricted and production API documentation is hidden.
- Managed Identity accesses Graph and the container registry; the database connection string stays in Key Vault and is redacted from logs.
- Read-only Graph permissions, non-root containers, HTTPS with TLS 1.2+ and encrypted database connections.
- Append-only history with soft deletes; repository-layer queries avoid raw SQL.

Technology stack

React / TypeScript / Microsoft Fluent UI · Python / FastAPI · PostgreSQL · Entra ID / MSAL; Microsoft Graph · Azure App Service containers, Key Vault and Container Registry · Bicep infrastructure as code

An organisation's IT administrators reviewing its Microsoft 365 and Microsoft Entra ID tenant. · Selected experience from Jonathan du Plessis's October 2026 portfolio.

WEB-BASED PLATFORM SOLUTION · MULTI-TENANT / 2025-2026

Capital Management

A funding platform replacing spreadsheet-based tracking with an audited system of record. It covers contract capture and approval through amortisation, payments, investor statements and reporting. Each client organisation operates in its own database, alongside an investor self-service portal.

Business functionality

- Medium-Term and Promissory Note capture, contract rollovers and multi-step approval workflows.
- Automatic interest and capital schedules, rate-change impact analysis and schedule amendments.
- Payment matching, broker fees, stamp duty and withholding tax.
- PDF investor statements, document review, Excel reporting and journal exports.
- Investor self-service access to contracts, schedules and documents.
- Tenant onboarding, roles, email notifications and automatic foreign-exchange rates.

Architecture & controls

- Staff use Entra ID; investors use Keycloak with MFA. Tokens are signature-verified and users must be pre-approved.
- Permissions apply per module and action; investors can access only their own contracts.
- Maker-checker approval stages and before-and-after audit values make changes accountable.
- A database per tenant, AES-256-encrypted credentials, TLS connections and private document storage.
- Content Security Policy, security headers and a strict CORS allowlist protect browser and API boundaries.
- Per-user rate limits, parameterised database queries and input validation harden request handling.

Technology stack

React / Material UI · Node.js / Express REST API · PostgreSQL / stored functions · Microsoft Entra ID and Keycloak · FX-rate feed and email integrations · Azure App Service, PostgreSQL and Blob Storage

Organisations raising investor funding through Medium-Term Notes and Promissory Notes. · Selected experience from Jonathan du Plessis's October 2026 portfolio.

WEB-BASED PLATFORM SOLUTION • SERVERLESS / 2026

Whistleblower Reporting Portal

A secure public reporting channel guiding misconduct concerns to the compliance team's inbox. Reporters can choose anonymity. Serverless delivery avoids an application database, while reference numbers and urgent-case flags help the compliance team identify and follow up submissions.

Business functionality

- Eight guided sections cover reporter details, concern, incident, people, evidence, previous reporting, urgency and desired outcome.
- Ten concern categories plus Other, supporting reports across all seven operating countries.
- Optional anonymity; reporters decide whether to provide a name or contact details.
- Relevant follow-up fields appear conditionally, with clear validation feedback before submission.
- Unique reference numbers accompany formatted compliance emails; urgent reports receive an [URGENT] subject flag.
- Screen-reader and keyboard support, with responsive mobile and printable layouts.

Architecture & controls

- Anonymous submissions clear identity fields and never send them; logs retain only the report reference.
- Reports are not retained in an application database or the sending mailbox; delivery is to the compliance inbox.
- Server-side field validation, length limits and unsafe-character filtering protect email construction against injection.
- Strict Content Security Policy blocks framing and third-party scripts; camera, microphone and location access are disabled.
- Microsoft Graph OAuth replaces legacy SMTP credentials; an access policy restricts the app to one sending mailbox.
- Credentials remain in Azure configuration and can rotate without redeployment; errors disclose no internal details.

Technology stack

HTML, CSS and JavaScript · Node.js · Microsoft Graph / Entra ID OAuth · Azure Static Web Apps

A financial services group operating in seven African countries, serving employees, contractors, customers and other reporters. · Selected experience from Jonathan du Plessis's October 2026 portfolio.