

Bantu - Bethu Beya

Software Engineer | Gqeberha, Eastern Cape, South Africa

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SUMMARY

I build and run production software in C#/.NET and Next.js, working primarily in object-oriented design and applying GoF design patterns in both coursework and production code. Over the past two years I led the build of a maintenance platform now live across 7 properties, built the backend of a records system handling 30–40 batches a day, and delivered systems for 2 paying clients while completing my degree full-time. I take a system from requirements to production and keep it running. I am familiar with a range of frameworks and languages and open to learning new ones where a project calls for them. Graduating December 2026; available from January 2027.

TECHNICAL Skills

Languages (2 yrs+): C#, JavaScript, TypeScript, Python, SQL (T-SQL, PostgreSQL), HTML5, CSS3

.NET Ecosystem: ASP.NET Core MVC, ASP.NET Core Web API, Blazor, Entity Framework, ASP.NET Identity, SignalR

Web & Frontend: React, Next.js, Tailwind CSS, Bootstrap 5

Data & Backend: SQL Server, PostgreSQL, Supabase, Firebase, JWT authentication

Cloud & Tooling: AWS, Docker, Visual Studio, Azure DevOps, Git, Postman, Linux, Microsoft 365 Admin

Engineering Practice: Object-oriented design and GoF design patterns, REST API design, relational data modelling, role-based access control, secure authentication, Agile/Scrum

Also familiar with: Go, Django, Paystack integration

PROFESSIONAL EXPERIENCE

Software Engineer & Founder

Nov 2025 – Present

Bay Software (Pty) Ltd – part-time, alongside full-time study

Gqeberha, South Africa

- Delivered production systems for 2 paying SME clients, owning each from requirements through deployment and ongoing support.
- Built a transport booking platform with automated WhatsApp confirmations, replacing bookings handled by phone and manual messages.
- Built a reusable C#/ASP.NET Core and Next.js module library (authentication, invoicing, notifications, dashboards) used to assemble client projects, and a client portal (React, Supabase) showing live delivery status.

Africorp International Properties (Pty) Ltd

May 2024 – Jul 2026 (contract)

Gqeberha, South Africa

Software Developer — Maintenance Management Platform

2026 – Jul 2026

- Led development of a maintenance work-order platform (C# Web API, Next.js, SQL Server): tenant fault intake, job-card creation and dispatch to specialist teams (electrical, plumbing, lifts, painting, window fitting, CCTV and biometric security), client sign-off, and supervisor quality review giving every job a verifiable audit trail.
- Live since May 2026 across 7 properties, 235+ job cards completed. Removed the daily office-to-site trips for job handover and checks, saving the maintenance team 4 hours a day.
- Built CEO reporting on average time to attend, long-outstanding faults and weekly throughput.

Software Developer — Records System & Web Platforms

May 2024 – 2025

- Built the authentication and business-logic backend of a municipal payments records system (C#, Windows Forms, OOP, .NET Framework) that replaced paper invoices and documents. Live since September 2024, processing 30–40 document batches a day, with the full paper archive from 2016 captured into it.
- Delivered 6 websites including 2 e-commerce stores, with domain registration and email hosting configured.
- Deployed and supported all systems on the company's on-premise servers; administered Microsoft 365 for all staff.

ENGINEERING PROJECTS

HemaFlow – Haematology Laboratory System (BTech Capstone) | ASP.NET Core MVC, SQL Server, Azure DevOps2026

- Built the Lab Technician subsystem end to end: barcode specimen verification, role-based test assignment,

STAT -prioritised workload dashboard, result capture with abnormal-value detection and peer verification, full audit trail, and automated PDF reports to clinicians.

- Modelled the specimen and test-request lifecycle as explicit domain states with guarded transitions, keeping the status rules in the domain layer rather than spread across controllers.

Laundry Management System | C#, Blazor, .NET, GoF design patterns | [repo](#) 2026

- Group-built management system applying six Gang of Four design patterns (Abstract Factory, Factory Method, Decorator, Strategy, Singleton, Observer). Designed and implemented the Observer: an order subject that registers and removes observers at runtime and pushes status transitions to four independent notifiers (customer, staff, driver, admin dashboard), each filtering the statuses it acts on, so new notification channels can be added without changing order logic.

Call Centre System | C#, .NET 8, Blazor, GoF design patterns | [repo](#) 2026 – Present

- ONT412 group project structured around the Iterator, State, Composite and Proxy patterns. Implemented the **protection proxy**: a surrogate implementing the same service interface as the real subject, so callers cannot tell they hold a proxy. Each operation checks a role-to-operation permission matrix, records exactly one audit entry per access decision, then delegates — keeping authorisation out of the business logic and replacing hard-coded role checks scattered through methods.

CampusSwap — Student Marketplace Platform | React, ASP.NET Core Web API, PostgreSQL, SignalR 2024 – Present

- Designed and built a peer-to-peer marketplace serving Nelson Mandela University's student population (15,000+), with real-time messaging, Paystack escrow payments, and sign-up restricted to verified student email addresses.
- Built the full backend as an ASP.NET Core Web API over PostgreSQL, separated into controller, service and repository layers behind interfaces so that payment, messaging and listing logic can be changed and tested independently; SignalR for real-time features. Deployed and operated on AWS using Docker.

Skills Grid — MICT SETA National Skills Challenge | Next.js, SQLite, Python/Django, Gemini AI Mar 2026

- Team lead and full-stack developer on a 4-person team; built a rural skills development platform in 48 hours with an AI learner-to-opportunity matching microservice, placing **3rd** in the Eastern Cape and selected for the **national finals** in Johannesburg.

ACTIVITIES & INTERESTS

Youth Representative – Church Governing Committee 2024 – Present

Gqeberha, South Africa

- Elected youth representative; minute-taker for committee meetings, recording resolutions and action items and circulating them to members.

Interests: Strength training. Self-directed research reading deeply into how systems work, inside software (telecom protocols, audio fingerprinting, hardware and IoT) and outside it.

EDUCATION

Nelson Mandela University Gqeberha, Eastern Cape

Bachelor of Technology in IT (Software Development) – NQF Level 7 Feb 2026 – Dec 2026

Relevant coursework: Software Design Patterns, Operating Systems, Application Security, Project Management.

Nelson Mandela University Gqeberha, Eastern Cape

Higher National Diploma in IT (Software Development) – GPA 3.31/4.0, 9 distinctions Jan 2023 – Dec 2025

Relevant coursework: OOP, Data Structures & Algorithms, Data Analysis

National Senior Certificate (STEM stream) 2022

Bachelor's degree pass