

NATHAN RICHTER

Full-Stack Developer · C# / .NET · SQL · Azure

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South African and Canadian citizen · Willing to relocate anywhere

Portfolio: justcallmenate.co.za | github.com/TitaniumN8 | Live project: pickanddrive.co.za

PROFILE

I am a full-stack developer with a BSc in Computer and Information Sciences (Application Development), which I completed with distinction. I like building complete products on my own, from the database to the deployed site. My latest is Pick and Drive, a rugby trading card game I designed, built and run live on Azure with its own accounts, game economy and admin tooling. I work mainly in C# / .NET and SQL, and also in Java for Android and Python, and I enjoy the hardware side too, from a 3D-printed Arduino flight joystick to an offline AI voice assistant. I hold South African and Canadian citizenship, so I can work in either country without sponsorship, and I am happy to relocate anywhere.

TECHNICAL SKILLS

Languages: C#, Java, Python, SQL / PL-SQL, JavaScript, HTML, CSS, C++ (Arduino)

Frameworks: ASP.NET Core (Web API, Identity), Entity Framework Core, Android (Java), Angular, Node.js, Flask

Databases: Microsoft SQL Server, Azure SQL, SQLite, Oracle, MongoDB, Firebase: schema design and relational modelling

Cloud & DevOps: Microsoft Azure (App Service, Azure SQL), GitHub Actions CI/CD, RESTful API design, Swagger / OpenAPI

AI: Ollama (local LLMs), Whisper speech-to-text, XTTS voice synthesis

Tools: Git and GitHub, Visual Studio, VS Code, Android Studio, 3D design and 3D printing

PROJECTS

Pick and Drive · Online rugby trading card game · pickanddrive.co.za

2026 · Live

Stack: C#, ASP.NET Core 8, EF Core, ASP.NET Core Identity, JavaScript, Azure App Service, Azure SQL, GitHub Actions

- Designed and built an original trading card game, live on Azure: players collect cards from 12 clubs, open packs, build a 15-player squad and play the AI in a league and tournament.
- Made the server authoritative over the game economy (pack contents, coins, prices, unlocks), with plausibility checks and rate limits on reported match results to stop cheating.
- Secured accounts with ASP.NET Core Identity: hashed passwords, lockout after failed logins, per-IP rate limiting and a strict Content-Security-Policy.
- Built a separate admin card editor for cards and artwork that is never deployed, listens only on localhost and rejects remote connections.
- Set up CI/CD with GitHub Actions deploying to Azure App Service through OIDC (no stored passwords), with EF Core running SQLite locally and Azure SQL in production.

DreamTeam API · Fantasy rugby back end

Stack: C#, ASP.NET Core Web API (.NET 8), Entity Framework Core, SQL Server, Swagger

- Designed an 8-table relational database for a United Rugby Championship fantasy game, and researched and entered all 759 players, 16 teams, coaches and 24 stadiums by hand.
- Built a REST API with full CRUD across 8 resources, covering players, teams, fixtures, user squads and weekly team sheets, with unique IDs so players who share a name are never confused.

Ruggers · Android rugby app

Stack: Java, Android, Firebase Authentication, Firebase Realtime Database, OkHttp, API-Sports Rugby (RapidAPI)

- Android app showing fixtures and results for any chosen date, with live match odds pulled from a third-party REST API.
- Users sign in and make virtual-coin predictions stored per user in Firebase; the wallet settles each prediction automatically once the real result is in.

Local AI Voice Assistant · Python

- Built a fully offline voice assistant on a low-end GPU (4 GB VRAM): Whisper speech-to-text, a local LLM through Ollama, and XTTS voice cloning for spoken replies, with self-hosted SearXNG search, served over the home network with Flask and Socket.IO.

Arduino Flight Joystick · Hardware, C++

- Designed and 3D-printed a PC flight joystick from scratch, with an Arduino reading potentiometer axes and buttons so the PC recognises it as a game controller.

EXPERIENCE

Career Break

2021 – 2025

- Stepped back from studies following a family bereavement. Continued building software projects independently during this time.
- Cycled from London to Paris with a group in 2023, raising money for charity.

Mathematics Tutor · Varsity College

Jan 2020 – Dec 2020

- Tutored around 12 computer science students in mathematics over a full academic year, helping them consolidate core concepts and improve their results.

Tester & Translator · Up-Ed, Hilton

Jan 2020 – Feb 2020

- Carried out QA testing on an educational website and its companion mobile app.
- Translated content from English to Afrikaans for bilingual delivery.

EDUCATION

BSc, Computer and Information Sciences: Application Development

2018 – 2020

Varsity College, Durban North · **Graduated with Distinction**

IEB National Senior Certificate (Matric)

2014

Hilton College

LANGUAGES

English (fluent) · Afrikaans (proficient)