

Ntsika Ngilane

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Professional Summary

I am a full-stack developer and polymath who builds technology with intention and empathy. My experience ranges from creating mental health companion apps with real-time mood adaptation to designing secure, user-focused insulin pump systems.

I blend engineering precision with a strong design sensibility to create accessible, intuitive, and emotionally resonant interfaces. My work is driven by lived experience and a deep commitment to user well-being and autonomy.

Adept at rapid self-learning, systems thinking, and automation, I thrive at the intersection of technology and human experience. I approach each project with purpose and ethics, building solutions that support connection, healing, and freedom.

Above all, I care about the why behind every line of code and design decision, ensuring my work is meaningful, impactful, and inclusive.

Technical Skills

Languages: Python, JavaScript, TypeScript, Dart, HTML5, CSS3, SQL, C#, C++, Bash, JSON, YAML

Frameworks & Libraries: React.js, Next.js, Node.js, Express, Flask, FastAPI, React Native, Flutter, Tailwind CSS, Framer Motion, Jinja2, ASP.NET Razor Pages, Vue.js, Svelte

Databases: MySQL, SQLite, Firebase, MongoDB, PostgreSQL, Redis

DevOps & Tools: Git, GitHub Actions, Docker, Vagrant, Jenkins, CI/CD Pipelines, Bash scripting

Cloud & Servers: Synology NAS, TrueNAS, pfSense, Cloudflare, NGINX, Apache, AWS EC2/S3, Netlify, Vercel

UI/UX Design: Figma, Adobe XD, WCAG Accessibility, Responsive Design, Atomic Design

3D & CAD: AutoCAD, FreeCAD, Blender, Unity (Basics), Unreal Engine (Overview)

Office & Data: Excel (Advanced), Word (Templates/Macros), PowerPoint, Access, SQL Reporting

Cybersecurity: WPA3, MAC filtering, firewall configuration, endpoint hardening

Project Experience

- AI Personal Knowledge Base – Python-based local GPT-API memory system with semantic search and automation.
- Enterprise Home Server – 320TB Synology NAS build with custom firewall and cloud-integrated backup system.
- Resume Website – Tailwind + Framer Motion site built pixel-perfect from Figma.
- React Portfolio – Web app with GitHub integration, project gallery, and contact form.
- Mental Health Companion App – CBT-based journaling and mental health monitoring using Flutter.
- PC Benchmark & Review Lab – Built multiple test rigs for gaming, AI, and 3D workloads with water cooling and 4K capture.
- Networking Toolkit – Bash and Python scripts for IP scanning, port mapping, and bandwidth monitoring.
- Insulin Pump Concept – Low-profile wearable controlled via mobile/watch, smart sensors for diabetic fluctuation, 240W fast-charging integration with biometric authentication.
- Automated Invoice Generator – Python and Excel automation for invoice creation with templated styling.
- Legal Club Dashboard – Web dashboard to track cannabis law compliance, membership stats, and event registrations.
- Modular Blog Engine – Lightweight static site generator with markdown parsing and templated rendering.
- Gamified Study App – Flashcard and memory game mechanics using React Native and Firebase.

- Realtime Chat App – Socket.io and Node.js-powered group chat application with encryption.
- Smart Home Integration – Raspberry Pi + Home Assistant setup with motion triggers, lights, CCTV hooks.
- Code Library Sync Tool – Git-based sync solution for cross-device script libraries.

Personal Attributes

Empathetic with lived experience in mental health recovery

Independent learner and creative problem solver

Detail-obsessed and able to manage complex solo projects

Passionate about tech empowerment and digital well-being

Personal Interests

Gaming, PC building, 3D modeling, creative automation

Mental health tech, legal tech, cannabis regulation research

Streaming setups, YouTube content planning, system tweaking

Education

CodeSpace Institute (2025–)

Full-Stack Software Engineering – React, Node.js, Python, databases, deployment

Personal Attributes

- Visionary Tech Optimist – Driven by the belief that technology can empower healing, enhance self-awareness, and create lasting social impact.
- Empathetic Mental Health Advocate – Uses lived experience to build emotionally intelligent, user-sensitive systems and advocate for accessible wellness tech.
- Creative Under Pressure – Known for thriving in high-stakes environments, transforming pressure into inspired technical and creative solutions.
- Hyperfocused Self-Learner – Rapidly acquires and masters complex skills, frameworks, and concepts through immersive self-directed study.

- Obsessive About Systems – Sees everything as interconnected systems, from hardware infrastructure to mental models and interface logic.
- Multidisciplinary Synthesizer – Expert at blending software engineering, visual design, psychology, and legality into coherent, impactful solutions.
- Driven by Meaning – Every project is rooted in purpose, from advocacy tools to automation, seeking long-term impact beyond code.

Personal Interests

- Mental Health & Neurotechnology – Exploring tools for mood tracking, biofeedback, emotional UX, and AI-supported therapy models.
- PC Building & Tech Labs – Designing high-performance rigs and server environments optimized for creative, analytical, and experimental workflows.
- Gaming & Interactive Worlds – Studying and designing immersive, emotionally rich game mechanics for entertainment and educational applications.
- Legal Tech & Policy Innovation – Building systems for cannabis compliance, digital rights awareness, and policy visualization.
- Creative Automation – Creating smart scripts, bots, and AI pipelines that automate routine tasks and enable deep creative focus.
- Content Creation & Media Engineering – Developing full-stack pipelines for 4K video editing, streaming setups, and cinematic content workflows.
- Science Fiction & Philosophy – Exploring the ethical and philosophical implications of emerging tech, including AI consciousness, identity, and augmentation.