

Thabelo Mmbengeni

Chief Technology Officer | Chief Architect | Full-Stack Developer

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PROFESSIONAL SUMMARY

Chief Technology Officer, Chief Architect, and Lead Developer with over 15 years of experience spanning software development, system architecture, and technology leadership. I align technology initiatives with business goals, build and lead high-performing engineering teams, and design robust, scalable applications. My current focus is architecting agentic AI systems, AI-powered chatbots, and AI-driven automation that streamline business operations. Driven by continuous learning and innovation, I thrive in dynamic environments where I can craft technology strategies that deliver tangible business value — always selecting the right tools for the job.

TECHNICAL SKILLS

Languages: Node.js, JavaScript, Java, C/C++, HTML5, CSS3, React

Frameworks: NestJS, Knockout.js, PHP (CakePHP, Laravel), Bash, Ruby, Next.js, React Native

Databases & Query: PostgreSQL, SQL / MySQL, NoSQL, GraphQL

Cloud & Infrastructure: GCP, AWS, Docker / Docker Hub, Git / Bitbucket, Netlify, Render, DigitalOcean, Datadog

Server Tools: Linux, Apache, Nginx, Redis

Testing & Automation: GitHub Actions, Jenkins, Puppet, BugBug, Selenium

Architecture & Practices: Microservices, Event-Driven Architecture, Test-Driven Development (TDD), Strapi CMS

AI & Automation: Agentic AI chatbots, AI-agent orchestration, n8n, RAG, GPT-based automation, workspace & business automation, Claude Code, OpenAI Codex, Google Gemini

PROFESSIONAL EXPERIENCE

FCB.ai (formerly Finchatbot), Johannesburg

Aug 2024 – Present

Chief Technology Officer (CTO), Architect & Developer

- Lead technology architecture, full-stack development, and systems administration across the business.
- Design and build agentic AI chatbots and autonomous AI-agent workflows for clients and internal use.
- Architect AI-driven automation across business operations, workspace, and internal processes using n8n and custom AI agents.
- Integrate large language models into production systems, building end-to-end agent orchestration and automation pipelines.
- Leverage AI-assisted development tooling (Claude Code, OpenAI Codex, Google Gemini) to accelerate delivery and code quality.
- Own infrastructure, deployment, and ongoing systems administration.

Decommerce, Switzerland

Feb 2022 – Aug 2024

Chief Technology Officer (CTO) — Contractor

- Architected all business technology systems to align with strategic business goals.
- Designed systems and application architecture directly from business requirements.
- Identified and validated business requirements to inform system design.
- Selected and set up the technology stack for implementation.
- Led architectural design and review processes.

- Conducted code reviews, providing feedback and technical guidance.
- Managed cloud infrastructure on Google Cloud Platform (GCP).
- Architected GPT-based automation solutions.
- Implemented Retrieval-Augmented Generation (RAG) within the SaaS ecosystem.
- Guided Web2 and Web3 architecture and integrations.
- Led backend development, delivering high-performance, secure, and scalable solutions.
- Owned security and compliance across the business.
- Oversaw DevOps practices, including CI/CD pipeline management and continuous monitoring, to streamline development and deployment.

Finchatbot, Johannesburg

Aug 2021 – Feb 2022

Chief Architect Officer (CAO)

- Architected all business technology systems.
- Identified and validated business requirements.
- Designed systems from business requirements and implemented architecture and high-level components.
- Selected technologies for each component and defined their interconnections.
- Conducted architectural reviews and led team code reviews.
- Mentored the team in development and architecture.

Finchatbot, Johannesburg

Jan 2019 – Aug 2021

Chief Technology Officer (CTO)

- Defined and implemented a recruitment roadmap and strategic costing for the technology department.
- Identified the tech resources needed to scale the business.
- Established project implementation processes, timelines, and resource costing.
- Attended client meetings to gather requirements, document use cases, and define technical scope of work.
- Partnered with marketing and customer success teams to define KPIs and ensure successful product launches.
- Defined and tested recruitment strategies for the technology team.
- Defined the organizational structure in line with roadmap deliverables.
- Administered Linux cloud systems (AWS, HostAfrica, Rackspace).
- Provided systems architecture and led research, development, and software delivery.
- Mentored a young team through peer-to-peer mentoring and upskilling in processes and software development.
- Designed processes and playbooks for the technology unit.
- Provided after-hours support for technical issues.
- Developed a technology roadmap aligned with the business vision.
- Researched new markets and technologies in the best interests of the business.
- Briefed management on high-level business objectives.

Finchatbot, Johannesburg

Aug 2017 – Jan 2019

Lead Developer

- Led a team of 8 software developers.
- Worked closely with clients to gather requirements and deliver business solutions.
- Architected and implemented software for business automation.
- Architected AI chatbot systems and researched new technology to improve the chatbot stack.
- Administered Linux cloud systems (AWS, HostAfrica, Rackspace).
- Collaborated closely with data scientists.
- Presented system-improvement proposals, including cost analyses.

- Produced detailed specifications and wrote production code.
- Tested products in controlled environments using automated tests.
- Prepared user training manuals and maintained systems post-deployment on client servers.
- Developed analytics tools for clients and internal use.

Ekaya, Cape Town

Feb 2016 – Sep 2017

Senior Developer

- Designed and developed backend systems; integrated in-house and third-party APIs.
- Fixed bugs and maintained existing applications.
- Implemented unit and integration testing.
- Wrote maintenance and deployment scripts.
- Managed Git revision control for development and live web servers, including public servers on Rackspace.
- Worked primarily in PHP, MySQL, PostgreSQL, CSS, JavaScript, jQuery, jQuery Mobile, and Ruby.
- Developed using the CakePHP MVC framework.
- Administered Redmine with Git integration.
- Built Linux cron applications to deliver scheduled projects and remote-server reports.
- Researched software and hardware integration for specific business needs.
- Implemented continuous integration and deployment.
- Created backend APIs and implemented load testing and load balancing.

Bettech, Cape Town

Feb 2015 – Feb 2016

Senior Developer

- Developed backend and frontend systems for online betting platforms.
- Integrated third-party systems and implemented RESTful APIs.
- Documented new integrations and system functionality.
- Provided customer support.
- Upgraded legacy Java code and functionality to newer technologies.
- Gathered and documented customer requirements in meetings.
- Applied new business rules to legacy systems.
- Optimized SQL queries and databases.
- Participated in and conducted daily Scrum meetings.
- Wrote unit and integration tests.
- Tech: jQuery, PHP 4/5, MySQL, CSS, Elasticsearch, Material Design, Linux (Ubuntu, CentOS), Seagull PHP, PHPUnit, Bitbucket.

Altech ISIS, Cape Town

Jul 2013 – Dec 2014

Senior Front-End & Mobile Developer

- Developed front-end web and mobile applications (Android and iOS), including web-service calls and UI integrations.
- Analyzed and improved UI/UX and created RESTful APIs.
- Applied CI/CD to the existing environment and liaised with customers on design and functional requirements.

ZaPOP, Cape Town

Feb 2013 – Jul 2013

Team Lead — Mobile Development

- Led mobile software development; designed apps and analyzed data flow.
- Built Android, iPhone, and Windows applications (PhoneGap), backend APIs, and load testing/balancing for mobile web services.
- Set up Linux/Windows servers, administered Redmine (Git) and the OTRS ticketing system, and implemented CI/CD.

ZaPOP, Cape Town

Mar 2012 – Feb 2013

Team Lead — Web Development

- Managed a team of 8 web and mobile developers (including hiring) and moderated daily Scrum and Mission-Directed Work (MDW) meetings.
- Full-stack development (CakePHP) for internal and external clients; designed relational data models and maintained legacy systems.
- Managed a Rackspace server cluster, administered Redmine and OTRS, and applied custom CI/CD using Git.

Traffic Management Technologies, Cape Town

Nov 2008 – Feb 2012

Junior Software Developer

- Software design and development in C/C++ and Java, including custom Linux modules and OS-level development.
- Built tools for testing, data analysis, and 3D-simulation post-processing; ray-tracing rendering and 3D animation.
- Conducted hardware/software prototype, field, and integration testing, with supporting technical documentation.

University of the Western Cape, Cape Town

Feb 2007 – Aug 2008

Student Assistant

- Video/audio recording and editing, data management, academic content research, and wiki/HTML editing.

EDUCATION

University of the Western Cape, Cape Town

2007

BSc Computer Science — Completed all computer science modules; one mathematics module outstanding.

Shayandima High School, Limpopo

2003

Senior Certificate (Matric)

ADDITIONAL

Languages: English, Tshivenda

Interests: Travel, music (DJ), reading, video games

REFERENCES

Available on request.