
Cornelius Rautenbach

Software Engineer

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ABOUT ME

I enjoy the fine balance of applying technical knowledge, leadership, design, research, and experimentation to create simple, scalable and engaging user experiences. I'm driven, self-motivated and fond of collaborating with people to deliver high-quality and innovative solutions. I thrive on new challenges, adventures and discovering the unknown. I constantly crave more knowledge – always learning, often studying.

TECHNICAL SKILLS

Strong:

- **Web:** JavaScript, React, Vue.js, HTML, CSS / Sass, Webpack
- **Backend:** Golang, Node.js
- **Mobile:** React Native, Swift and Objective-C (iOS), Java and Scala (Android)
- **Other:** Java EE, C#, AWS (RDS, Cloudfront, S3, Lambdas etc.)
- **DB:** PostgreSQL, MongoDB, MySQL, SQLite

Knowledgeable: Angular 1-6, C++, SAP ABAP, Python, Redis

EXPERIENCE

Ship Logic, Pretoria, South Africa – *Solution Architect*

DEC 2019 – PRESENT

- Leading the development of a shipping software solution that revolutionises the way parcels are delivered.
- Using React on the web frontend, React Native for the driver app and Golang for the backend on an AWS microservice stack, the technology is ideal for rapid development and scale at the same time.

ITSI Holdings, Pretoria, South Africa – *Solution Architect*

MAR 2019 – DEC 2019

- Designing sustainable, scalable technical solutions based on the business requirements whilst overseeing that development efforts are aligned with the overall strategy.
- Overseeing and participating in technology selection for new projects.
- Development of a feature-rich web e-reader (**PWA using Vue.js**) to enable users to access all of their e-learning content on the go. This includes making highlights, drawing on PDFs, uploading content (similar to Google Drive), doing assessments and more.
- Development of a real-time analytics verification system (**Node.js**).
- Development of automated API integration tests using **Mocha and Chai**.

ITSI Holdings, Pretoria, South Africa – *Head of App Development*

MAR 2017 – MAR 2019

- **Leading and managing a team** of Android, iOS and Windows developers – providing guidance, strategy and collaboration with other departments.
- Maintaining an Android app (**Java and Scala**), implementing new features and optimizing the codebase to improve functionality on older devices.
- Development of an app for parents (**Xamarin**) to view learner activity, calendar events and newsletters.
- Implementation and coordination of automated UI test frameworks for native apps.
- Development of a project management tool (**Vue.js**) to ensure teams are always up to date with tasks, milestones and commits.

ITSI Holdings, Pretoria, South Africa – *iOS Developer*

JAN 2014 – MAR 2017

- Implemented a feature-rich iOS e-reader (**Objective C and Swift**) that involves complex user interfaces, encryption, compression and server-communication (REST).
- Developed libraries for highlighting, generating summaries and rendering a tree-view of data (**JavaScript**).

EPI-USE America, USA – *Full-stack developer*

MAR 2011 – SEP 2013

- Technical consultant at various firms:
 - **Massachusetts Institute of Technology, MA, USA**
 - Led the discovery, design and development of various rich mobile web applications that integrate with an SAP backend (SAP ABAP, JSP, Java, Struts, HTML and JS).
 - **Starwood Hotels & Resorts Worldwide, Inc, NY, USA**
 - Developed an e-learning engine (Flash) that hosts and tracks e-learning content, simulations and animations.
 - **Roche/Genentech, CA, USA**
 - Developed a set of Content Migration Accelerators (Java) – tools built to automate content migration from legacy systems to the SAP LSO AE.

Grintek Ewation, Pretoria, South Africa – *Java Developer*

DEC 2009 – MAR 2011

- Development (**Java**) of signal intelligence tools, which include the following:
 - Video chat and voice calls using radio signals.
 - Battlefield planning based on signal intelligence.

University of Pretoria, South Africa – *Assistant Lecturer*

JUL 2007 – DEC 2007

- Assisting with and teaching the 'Multimedia for the Web' course.

EDUCATION

Agile Project Management – *Torque IT*

AUG 2018

Master of Business Administration (Cum Laude) – *Edinburgh Business School*

2015 – 2017

This Masters programme covers key management disciplines, including people skills, economics, marketing, accounting, finance, strategic planning and project management.

BSc (Hons) Computer Science (Cum Laude) – *University of Pretoria, South Africa*

2009

This degree focusses on a range of complex Computer Science topics such as artificial intelligence, advanced computer graphics and network security.

BIS Multimedia (Cum Laude) – *University of Pretoria, South Africa*

2006 – 2008

The BIS Multimedia degree combines Computer Science and Information Science, focusing on software development and UI/UX design.

INTERESTS

When I'm not in front of a computer screen, I love building and planting things, playing squash, trying new food, travelling to locations with unparalleled natural beauty, ticking off bucket list items, developing games and co-finding new tech startups.

SIDE PROJECTS

A significant portion of my developer experience can be attributed to the side-projects I have been involved in after-hours. Here are some of the highlights:

Web development

- **Ticket Office** (<https://ticketoffice.co.za>) – *Node.js, Vue.js, MongoDB*

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- Founded and implemented an online ticket selling platform, that provides users with an efficient and affordable way to purchase tickets to events. The platform also provides native apps to make scanning tickets at entrances a breeze.
 - **Hey Happy** (<https://heyhappy.app>) – *Vue.js, Firebase*
 - Co-founded and developed a fun, free, interactive web-based (PWA) app that will teach you more about the emotional, behavioural, cognitive, alternative and nutritional ways to improve your mood.
 - **PICK a PET!** (<https://pickapet.co.za>) – *Node.js, Vue.js, MongoDB*
 - Co-founded and developed a website and mobile app that consolidates pets from South African shelters, and provides users with easy access to search for a new furry friend to adopt.
 - **Vistapath Biosystems** (<http://vistapathbio.com>) – *React, Node.js, MongoDB*
 - Improved the world's first automated tissue grossing platform by adding new features such as communication with the computer vision using ROS (Robot Operating System), integrating with a Laboratory Information System (Redox), report generation and user management.
 - **F0cal** (<http://f0cal.com>) – *React, Node.js*
 - Developed a marketing website, as well as a complex markup tool to mark up images using squares, lines and labels.
 - **NuProp** (<http://nuprop.co.za>) – *Angular 1, PHP, MySQL*
 - Invented and developed a slick property portal.
 - **Auction Software** (<http://www.auctionsoftware.co.za>) – *jQuery, PHP, MySQL*
 - Designed and developed an extensive auction management system that includes stock management, reporting, invoicing and integrating with Sage Pastel.

App development

- **Ticket Office Scanner** – *Native Android and iOS*
- **PICK a PET!** – *Native Android and iOS*

Game development

- **Bounsi** – *Unity, C#*
 - A creative 2D puzzle physics game (iOS and Android), where players help their extraterrestrial friends reach goals by drawing a series of lines with different physical attributes.
- **Pigs Divide** – *libgdx, Java*
 - A tilt-your-device game (Android), where players navigate through mazes and avoid deadly obstacles.
- **W82Send** – *JavaScript, HTML*
 - A web-based game as part of Vodacom's "Don't text and drive" campaign, where players are encouraged to try and send messages while driving and avoiding other cars and pedestrians.