

Hein Bekker

I am a front-end and back-end developer with over 20 years of experience and a passion for building an equitable, inclusive and sustainable society through education in the arts and sciences.

EXPERIENCE

Siyavula Education Front-end Developer

Feb 2016–Jul 2023

I helped to create educational software for Mathematics, Physics and Chemistry, and monitoring and evaluation tools for teachers.

As front-end lead, I was a bridge between designers and developers:

- Set the technical direction of the front-end stack.
- Created and maintained the colour palette, icon sets, UI components (both SSR and CSR), style guide, SSG for static pages, build scripts, and configurations of code quality tools.
- Unified 3 legacy themes and migrated page templates in parallel with new feature development.
- Worked with the product manager on software requirements and solution design.
- Created low-fidelity wireframes and high-fidelity mockups for mobile and desktop devices.
- Guided front-end implementation by the full-stack team.
- Conducted functional, non-functional and cross-browser testing.
- Provided engineering perspective in high-level product meetings.
- Explored new approaches and technologies that improved productivity and modernised the stack.

I also branched out into back-end development and data reporting:

- Created and maintained API endpoints for the front-end.
- Integrated third-party libraries and services.
- Wrote unit tests for and refactored parts of the application.
- Peer-reviewed the full-stack team's code.
- Created and maintained reports and dashboards for classroom and in-house use.
- Reviewed and optimised data models and queries.
- Set up and maintained the data analysis stack.
- Worked with the data analysis team on integrating their code into the back-end.

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TOOLS

Languages

CSS, HTML, JavaScript, Jinja, Nunjucks, PHP, Python, SCSS, SQL, TypeScript, XML

Frameworks

Flask, Ionic React, Pyramid, React, Tailwind CSS

Libraries

jQuery, Lodash, MathJax, React Hook Form, React Redux, React Router

Automation

Babel, Black, esbuild, ESLint, Flake8, Gulp, Husky, PostCSS, Prettier, SQLFluff, Vite, Webpack

Testing

BrowserStack, CircleCI, Mocha, nose

Data storage

PostgreSQL

Data handling

Alembic, dbt, pandas, SQLAlchemy

Data visualisation

Vega-Altair, Vega-Lite, Victory

Platforms

Docker, JupyterHub, Linux, Node.js

Version control

Git

UI design & vector graphics

Adobe Illustrator, Balsamiq, Figma

Design systems

Material Design

Freelance

Jan 2002–Dec 2015

Front-end & Back-end Developer

I worked both independently and within agency teams, and often took on multiple roles as designer, front-end developer, back-end developer and technical support person.

- Built 18 websites for small businesses, including broadcast media consultancies, guest houses, an architecture firm, an art gallery, an event agency and a radio station.
- Built 12 marketing websites for renowned brands, such as PUMA, BlackBerry, Standard Bank, Castrol, Spur, 5FM and Metro FM.
- Built 8 websites for magazines and online communities that ranged from creative writing and visual arts to music and urbanism.
- Built a web framework and content management system, and provided maintenance and support to clients for 8 years. Subsequently, switched to Drupal for 5 years.

Liquid Fridge

Jan 2002–Dec 2014

Co-founder & Organiser

I was a co-founder and an organiser of a community that sought to develop South African arts through fostering interaction and mutual support.

Our work included a blog, a forum, newsletters, workshops, film screenings, radio music programmes and club nights, and featured musicians, artists and technologists from South Africa and abroad.

CERTIFICATIONS

Generative AI Fundamentals

2023

Databricks

Lakehouse Fundamentals

2023

Databricks

dbt Fundamentals

2022

dbt Labs

Machine Learning Fundamentals with Python

2020

DataCamp

Data Visualization with Python

2020

DataCamp

Data Manipulation with Python

2020

DataCamp

Importing & Cleaning Data with Python

2020

DataCamp

Python Fundamentals

2020

DataCamp

SQL Fundamentals

2020

DataCamp