

# 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 (Jinja, React), style guide and other documentation, 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 (REST).
- 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 content management system and provided maintenance and support to clients for 8 years. Subsequently, switched to Drupal for 5 years.

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## 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

