

# Hein Bekker

*I am a front-end and back-end web 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** Feb 2016–Jul 2023 **Front-end Web Developer**

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 Web 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.

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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

<b><u>Data Visualization with Python</u></b>	2020
DataCamp	
<b><u>Data Manipulation with Python</u></b>	2020
DataCamp	
<b><u>Importing &amp; Cleaning Data with Python</u></b>	2020
DataCamp	
<b><u>Python Fundamentals</u></b>	2020
DataCamp	
<b><u>SQL Fundamentals</u></b>	2020
DataCamp	