

# DR JOSEPH MANGHAN

FRONTEND ENGINEER | CONTEXT ENGINEERING

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Capable, committed and enthusiastic Frontend Engineer with specialization in context engineering and spec-driven development. Experienced in implementing structured AI-first workflows to enhance team productivity and code quality. Passionate about UX, responsive design, and iterative improvement. Expertise across the full SDLC.

## Experience

### Frontend Engineer

*Backbase | Jan 2023 - present*

**Support and empower my squad in delivering essential features within the Identity Access Management space, primarily focusing on auth flows for banking contexts.**

Led the technical design for complex IAM features, including orchestrating input from stakeholders such as UX, BE and Tech Writers.

Well-versed in harnessing AI to expedite development, learning and support

- Seconded to task force developing SDD workflows company-wide, underpinned by training on context engineering best practices.
- Manage prompt and SDD strategy for feature delivery.
- Reduced testing overhead by introducing dedicated review and QA agent personas for the post-development phase.
- Directed workshops on context engineering and AI, facilitating discourse on innovative workflows and product development.

Oversaw the organisation, story mapping and UX liaison of a major refactor initiative employing a shared componentisation strategy

- Resulted in a significant improvement to code quality and UX parity across the product

Personally conducted an a11y audit to identify areas where the WCAG AA standard had not been met

- Tools utilised included web utilities such as WAVE, Playwright E2E accessibility packages, and manual screen reader reviews

Proactively proposed and delivered on an operational tech debt initiative that vastly improved our capacity to iteratively improve features

## Junior Frontend Engineer

Backbase | Aug 2021 - Dec 2022

## Web Development Internship

Rhys Welsh Web Design | Jun - Jul 2021

**Foundational experience with CMS content architecture.**

## PhD in Web Science & Music

University of Southampton | 2015 - 2020

**Utilised web practices to outsource compositional tasks to crowds.**

## Projects

|                                                                                        |                                                                                                     |
|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <a href="http://www.josephmanghan.com">www.josephmanghan.com</a>                       | <a href="#">skill-style-guide</a>   Published to <a href="#">skills.sh</a>                          |
| Designed, coded, and deployed via a single prompt - a study in long-horizon prompting. | Style conventions for agent skills and prompts - making prompt review as systematic as code review. |
| <a href="#">devai-cli</a>                                                              | <a href="#">gem-factory</a>                                                                         |
| Local-first CLI tool for AI-powered git commit message generation using Ollama.        | Development environment for deploying Gemini Gems with complex workflows.                           |

| Skills                                                                                                                    | Education                                                                             |
|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Technical:</b><br>TypeScript • Angular • React • Jest • Vite • Playwright<br>• Cypress • SCSS                          | <b>Pitman Training   The Tech Academy</b><br>Web Developer Diploma (Dist.)<br>2020-21 |
| <b>AI Tooling:</b><br>Context Engineering • Cursor • Claude Code • Gems •<br>Spec-driven development • Prompt engineering | <b>University of Southampton</b><br>PhD in Web Science & Music<br>2015-20             |
| <b>Professional:</b><br>Strong written & verbal communication • Mentorship<br>• Public speaking • Research & analysis     | MMus Music Composition (Dist.)<br>2014-15<br>BA Music (1st class)<br>2011-14          |