

Pro State Management in JavaScript

Designing, Building and Scaling a Production-Ready State Engine

Modern front-end teams face heavy toolchains and abstraction sprawl, while many developers lack a 'first principles' understanding of state engines. takes you under the hood, showing you how to build a simple browser-native state management library which tackles dependencies, observability, and inspectability, giving you a practical measure to compare the most popular state management engines of today. This book will teach you to harness the browser's native strengths like events, the DOM, and closures to craft a minimalist, understandable state management library. Giving you a deep understanding so you can ship a working engine adaptable to real web-based applications.

Split into four parts, the book starts by demystifying the event model, exploring topics like capture/target/bubble, DOM vs. custom events, delegation, and ergonomics of closures and module patterns. Part II builds the state engine step-by-step making trade-offs explicit along the way, including micro-benchmarks and surface performance tips. Part III rebuilds popular paradigms to sharpen your intuition. We reconstruct core ideas behind Redux, MobX, Zustand, Recoil and XState (statecharts and transitions) - then compare each to our event-driven engine in terms of clarity, ergonomics, and runtime costs. The final part provides you with projects relating to a searchable/paginated data-table, dashboard widgets with cross-component coordination, and an interactive tree list component.

By the end of this book, you will know the "why" behind these libraries by building them in miniature, leaving you with a comparative mental model you can apply in any stack.

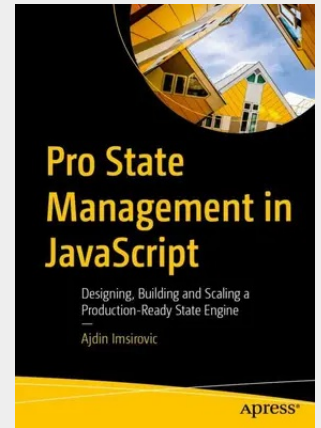
You Will:

- Learn to design, implement, and ship a production-ready state engine in plain JavaScript
- Understand and Explore Redux, MobX, Zustand, Recoil and XState
- Explore dependencies, observability, and inspectability, by using browser-native state management libraries

This Books is for:

Intermediate to advanced level developers and front-end engineers who are looking to turbo charge their understanding of state management and engines with the rights tools, frameworks and thinkings models to implement successfully.

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