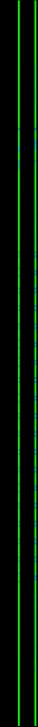


vaadin>

Full-Stack Productivity: Web Apps in Java with Vaadin



Jürgen Treml
Customer Success



2 DAYS AGO ON HN

React is winning by default and slowing innovation

2 DAYS AGO ON HN

When teams need a new frontend,
the conversation rarely starts with
“What are the constraints and which tool best fits them?”
It often starts with
“Let’s use React; everyone knows React.”

That reflex creates a self-perpetuating cycle where network effects, rather than technical fit, decide architecture.

BRIEF & DISCLAIMER

Who's talking?

20+ years in web development

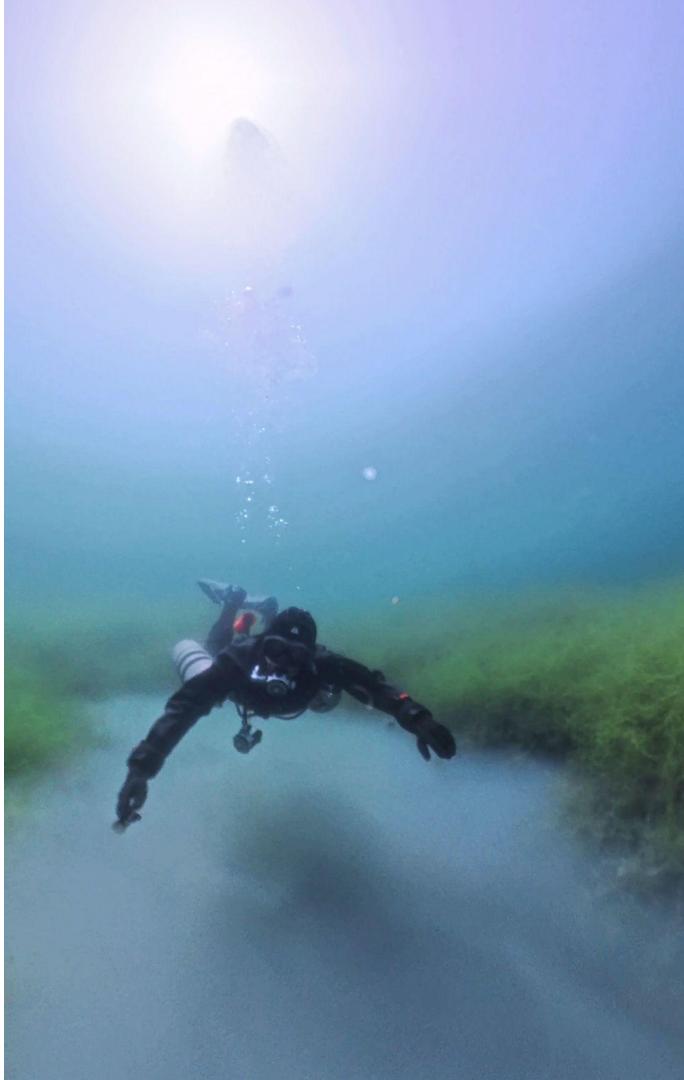
Originally aerospace R&D

10+ years at Vaadin

Cross-industry

Currently Customer Success
and Solution Architecture

Off-work mostly underwater



Vaadin

Platform & Company

OPEN-SOURCE & FREE

Core Java Framework

High-quality set of UI components

Collaboration Kit

Figma templates

3rd-party component directory

COMMERCIAL TOOLS & SERVICES

Additional components (Charts, Maps, Dashboard, ...)

Tools (Copilot, Testbench, ...)

Kits for SSO, Observability, Kubernetes, ...

Swing & Legacy Modernization (Automation Tooling, Components)

Support & Development Services

Commercial Maintenance

01

Vaadin Birds-Eye View

- | Who's using it?
- | How is it different?
- | How does it work?

02

Live Demo

vaadin} >

Vaa... what?

Northern Origins & Bridging the Gap

vaadin»

Finnish for (female) reindeer

The birthplace of the Vaadin framework

Bringing `<web applications>`
to the `Java {}` world.



Who's using it?

**We've built business web
applications for many business
verticals since the year 2000.**

81%

Of Fortune
500 Companies

25+

Years of
Experience

200k+

Developers
worldwide

The hard life of a web developer

FAST-MOVING

Framework "of the day"
Myriad toolchains
Both evolve and become outdated fast

SKILL SETS & SILOS

Coordinate designers, frontend and backend teams
Agree APIs between frontend and backend
All requiring different skill sets
Steep learning curves and on-boarding

CUTTING-EDGE & EXCITING - MAYBE.

PRAGMATIC, FAST, EFFICIENT - NOT SO MUCH!

How things could be

ONE STACK, FULL STACK

AUTOMATED COMMUNICATION

SOLID FOUNDATION & ECOSYSTEM

REUSE OF TALENT AND SKILLS

FAST & EFFICIENT BY DEFAULT

FLEXIBLE & CUSTOMIZABLE WHEN NEEDED

Full-stack with Vaadin

 Comes with **50+ ready-to-use UI components**

Labels, Button, Grids, Charts, Maps, ...

 Using **modern web technologies under the hood**

NPM, Vite & WebComponents



Fully integrated with the **Java Ecosystem**

Works with Spring Boot, Maven, JUnit, ...



Enhanced security out-of-the-box

Server-side logic, state, data binding and validation reduce attack surfaces.



Java only, no need for HTML, CSS or JavaScript

But customizable when needed

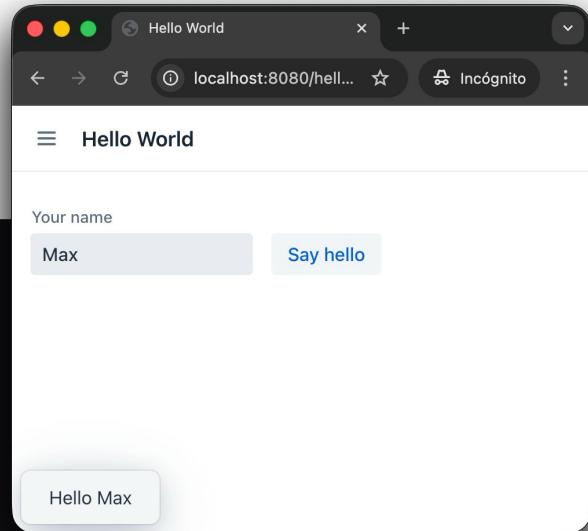


Easy deployment in different environments

Ship as jar or war, just like any Java app

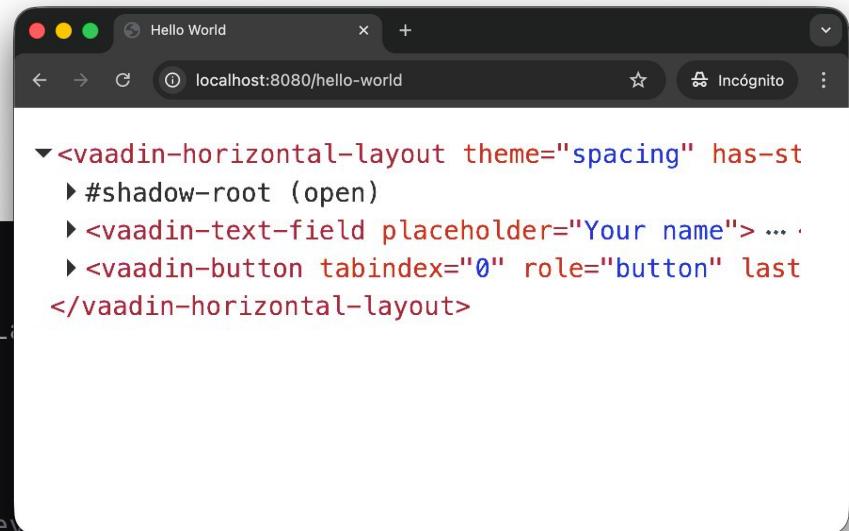
Vaadin Hello World

```
@Route(value = "")  
public class HelloWorldView extends HorizontalLayout {  
  
    public HelloWorldView() {  
        var name = new TextField("Your name");  
        var sayHello = new Button("Say hello", event ->  
            Notification.show("Hello " + name.getValue());  
  
        add(name, sayHello);  
        setMargin(true);  
    }  
}
```

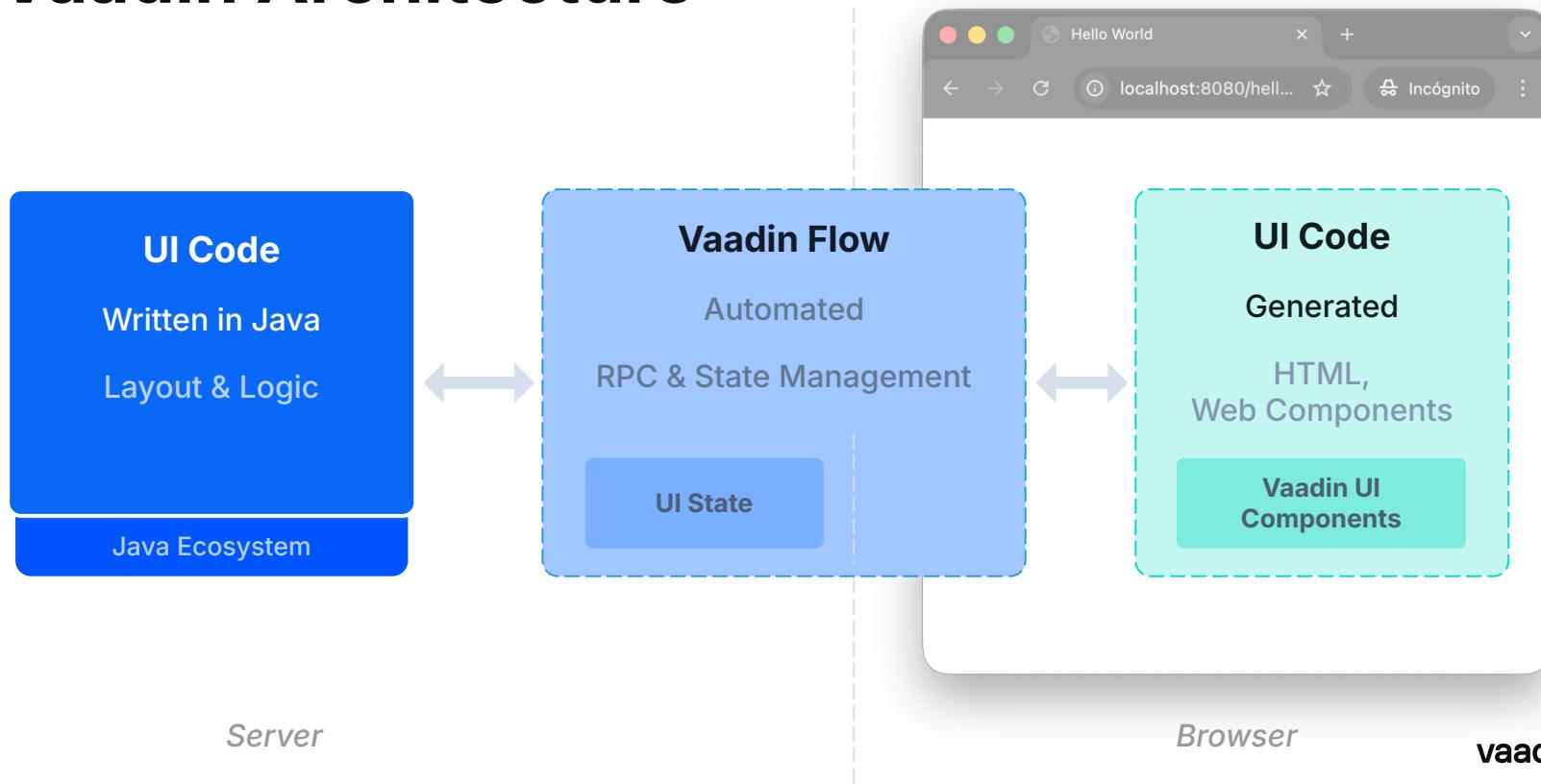


Vaadin Hello World

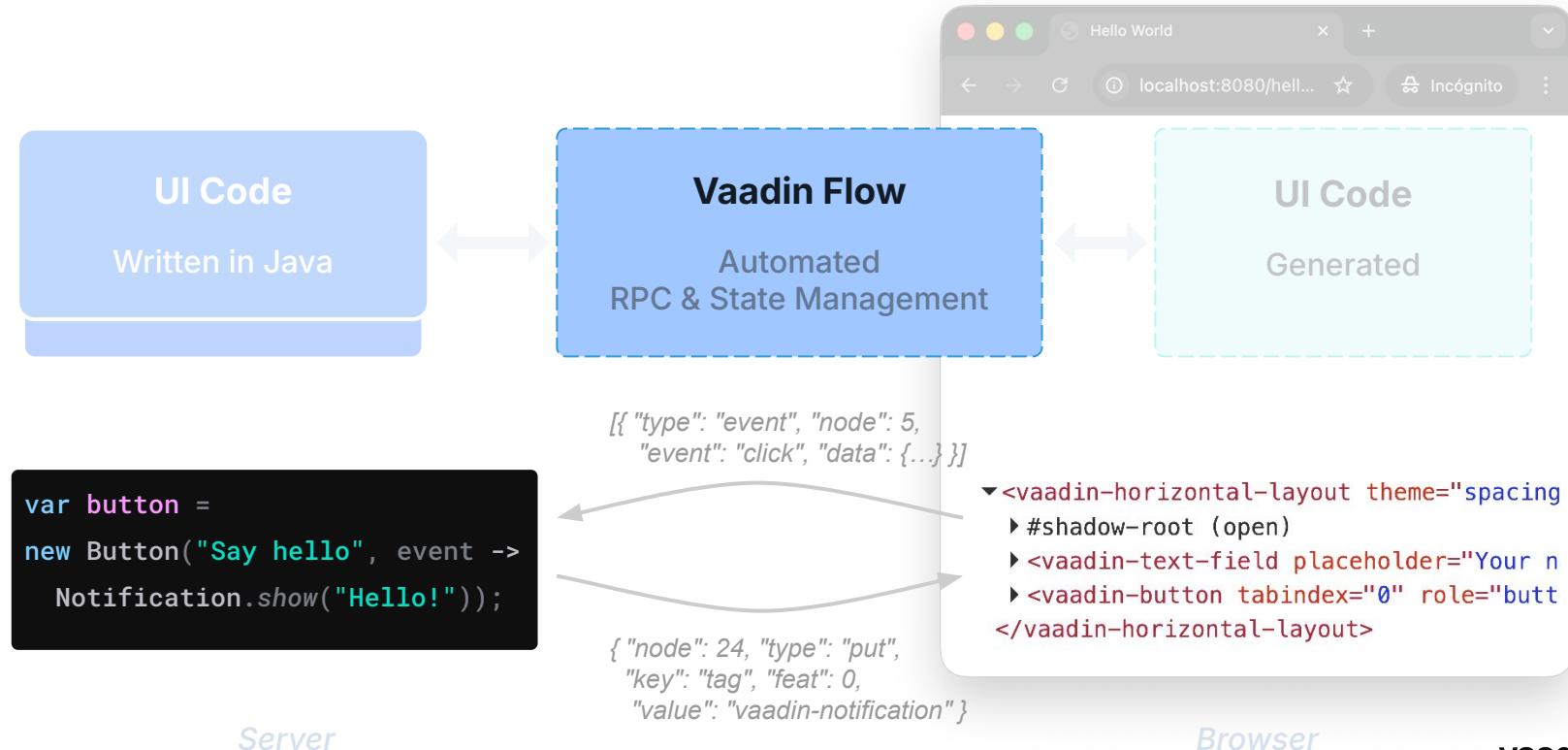
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@Route(value = "")  
public class HelloWorldView extends HorizontalLayout {  
  
    public HelloWorldView() {  
        var name = new TextField("Your name");  
        var sayHello = new Button("Say hello", event ->  
            Notification.show("Hello " + name.getValue());  
  
        add(name, sayHello);  
        setMargin(true);  
    }  
}
```



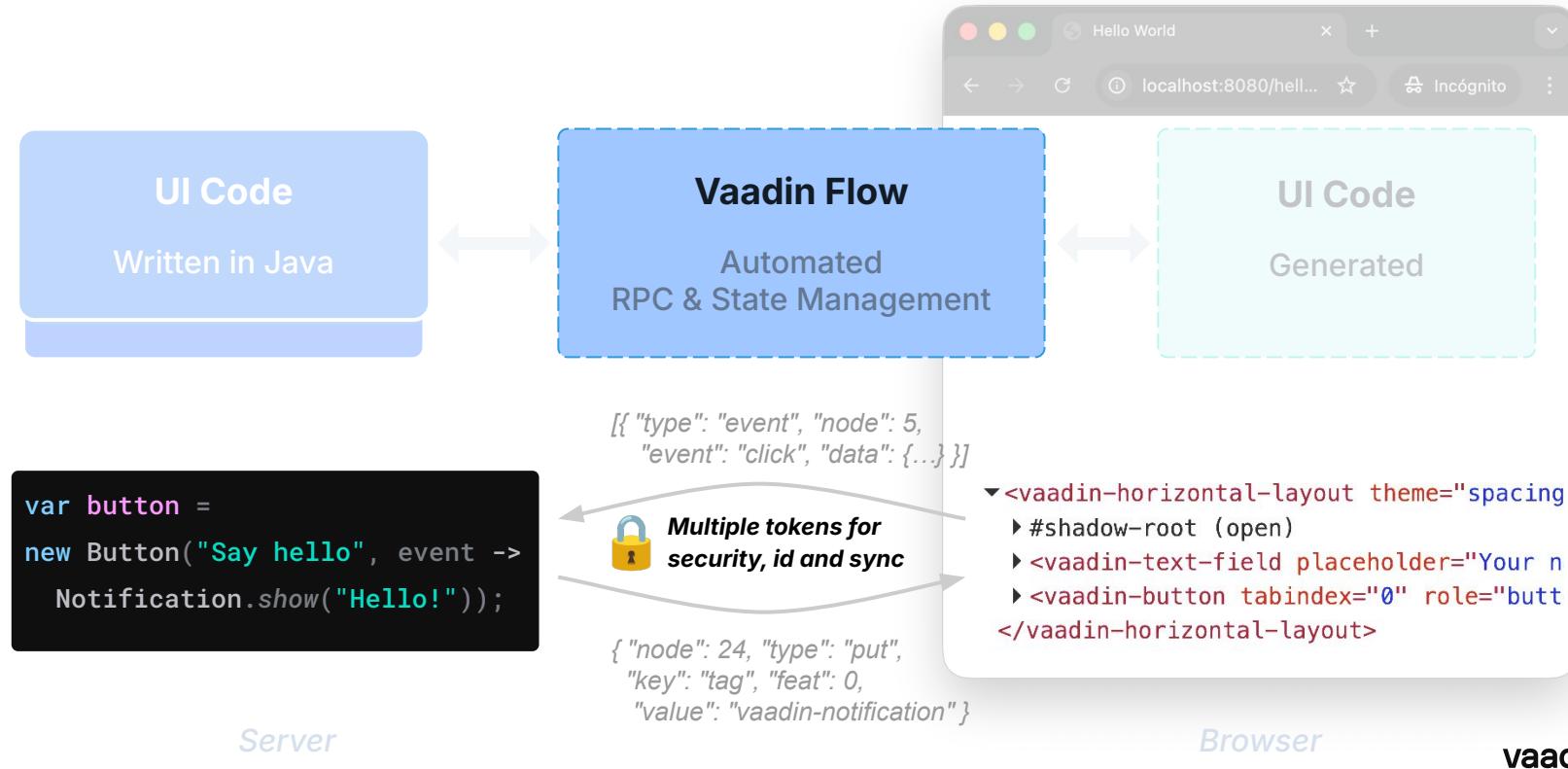
Vaadin Architecture



Vaadin Architecture



Vaadin Architecture



01

Vaadin Birds-Eye View

02

Live Demo

Hello World

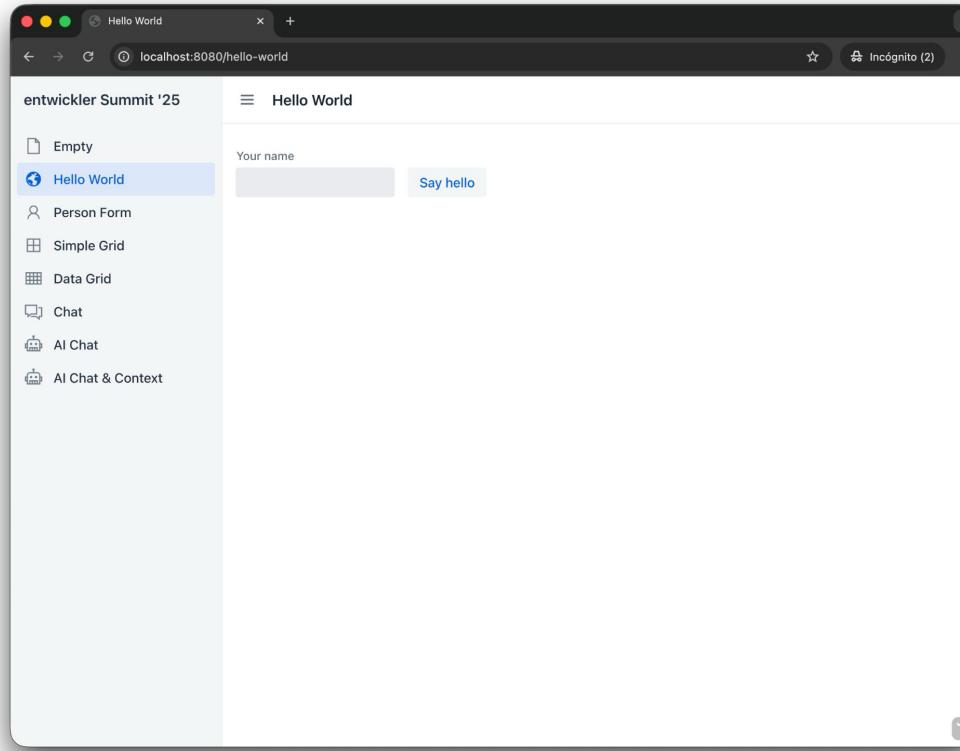
Theming & Visual Editing

Forms & Data Grids

Chat, Collaboration & AI

DEMO I

Hello World



DEMO II

Forms & Form Layout

The screenshot shows a Vaadin application window titled "Person Form". The window has a dark theme with a sidebar on the left and a main content area on the right.

Left Sidebar:

- Entwickler Summit '25
- Empty
- Hello World
- Person Form** (selected, highlighted with a blue border)
- Simple Grid
- Data Grid
- Chat
- AI Chat
- AI Chat & Context

Main Content Area:

Person Form

Personal Information

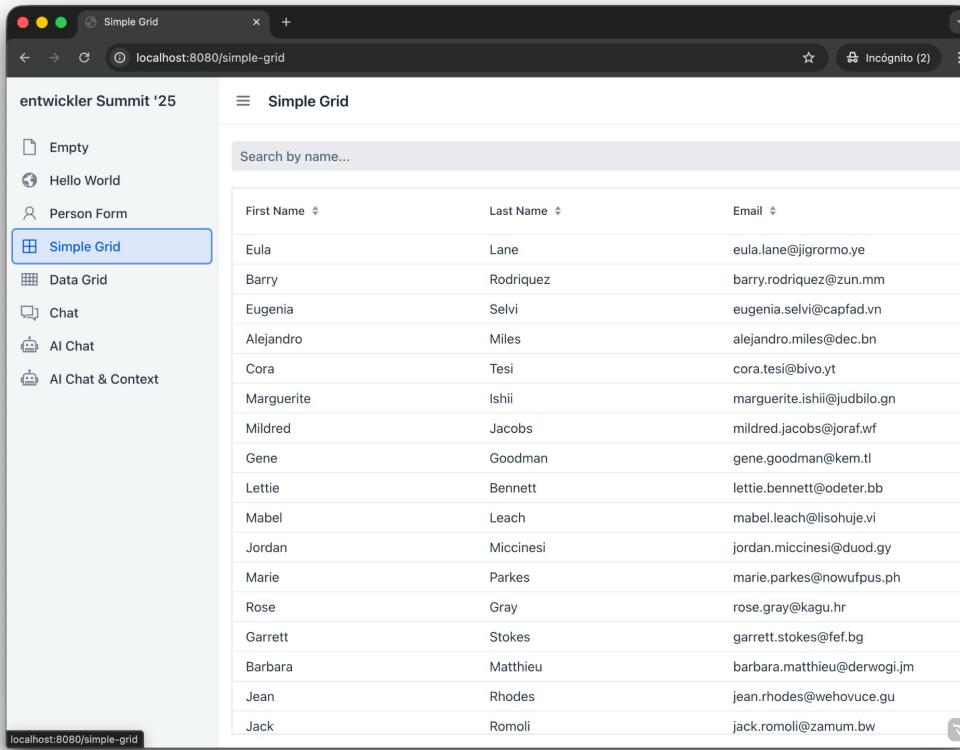
First Name	Last Name
<input type="text"/>	<input type="text"/>
Birthday	Phone Number
<input type="text"/> (calendar icon)	<input type="text"/>
Email	Occupation
<input type="text"/>	<input type="text"/>

Buttons:

Save Cancel

DEMO III

Simple Grid & Search



The screenshot shows a web application running at localhost:8080/simple-grid. The left sidebar contains a navigation menu with the following items:

- entwickler Summit '25
- Empty
- Hello World
- Person Form
- Simple Grid** (selected)
- Data Grid
- Chat
- AI Chat
- AI Chat & Context

The main content area is titled "Simple Grid". It features a search bar with the placeholder "Search by name...". Below the search bar is a table with three columns: "First Name", "Last Name", and "Email". The table contains 15 rows of data:

First Name	Last Name	Email
Eula	Lane	eula.lane@jigrorno.ye
Barry	Rodriquez	barry.rodriquez@zun.mm
Eugenia	Selvi	eugenia.selvi@capfad.vn
Alejandro	Miles	alejandro.miles@dec.bn
Cora	Tesi	cora.tesi@bivo.yt
Marguerite	Ishii	marguerite.ishii@jedbilo.gn
Mildred	Jacobs	mildred.jacobs@joraf.wf
Gene	Goodman	gene.goodman@kem.tl
Lettie	Bennett	lettie.bennett@odeter.bb
Mabel	Leach	mabel.leach@lisohuje.vi
Jordan	Miccinesi	jordan.miccinesi@duod.gy
Marie	Parkes	marie.parkes@nowufpus.ph
Rose	Gray	rose.gray@kagu.hr
Garrett	Stokes	garrett.stokes@fef.bg
Barbara	Matthieu	barbara.matthieu@derwogi.jm
Jean	Rhodes	jean.rhodes@wehovuce.gu
Jack	Romoli	jack.romoli@zamum.bw

DEMO IV

Advanced Grid

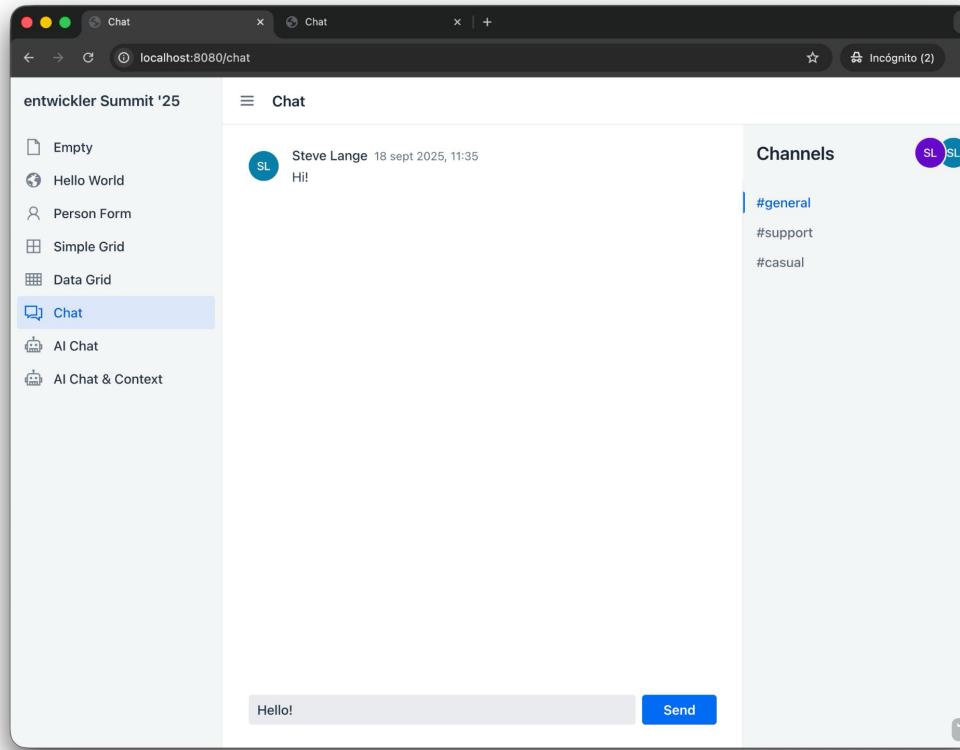
The screenshot shows a web browser window titled "Data Grid" at the URL "localhost:8080/data-grid". The left sidebar, titled "entwickler Summit '25", contains a list of applications: Empty, Hello World, Person Form, Simple Grid, Data Grid (which is selected and highlighted with a blue border), Chat, AI Chat, and AI Chat & Context. The main content area is titled "Data Grid" and displays a table with the following data:

	Client	Amount	Status	Date
1	Amarachi Nkechi	\$47,427.00	Success	5/9/2019
2	Bonelwa Ngqawa...	\$70,503.00	Success	5/9/2019
3	Debashis Bhuiyan	\$58,931.00	Success	5/7/2019
4	Jacqueline Asong	\$25,053.00	Pending	4/25/2019
5	Kobus van de Ve...	\$7,319.00	Pending	4/22/2019
6	Mattie Blooman	\$18,441.00	Error	4/17/2019
7	Oea Romana	\$33,376.00	Pending	4/17/2019
8	Stephanus Huggi...	\$75,774.00	Success	2/26/2019
9	Torsten Paulsson	\$82,531.00	Pending	2/21/2019

The browser status bar at the bottom shows "localhost:8080/data-grid".

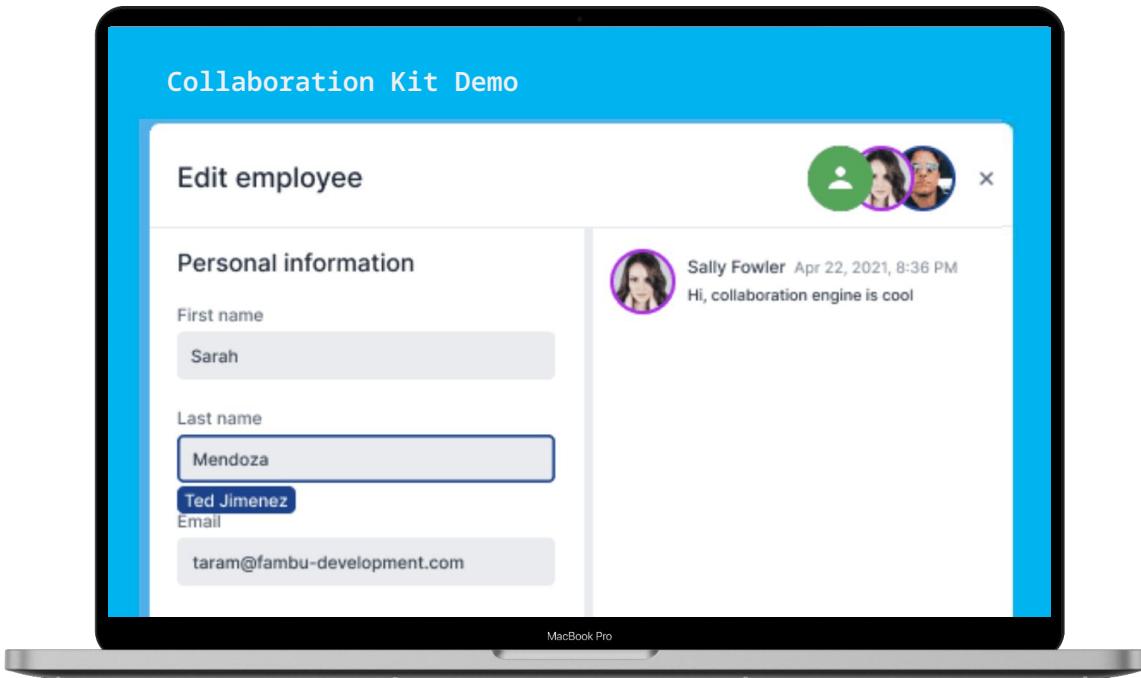
DEMO V

Chat Components



QUICK DETOUR

Vaadin Collaboration Kit



USER PRESENCE

Allow users to see each others presence in a part of the application.

COLLABORATIVE EDITING

Enable collaborative editing with clear indication of each user's editing location.

INTERACTIVE CHAT

Allow your users to chat with each other in-place for effective collaboration.

DEMO VI

AI Chat Bot

The screenshot shows a web application titled "entwickler Summit '25" on the left sidebar. The sidebar contains links to "Empty", "Hello World", "Person Form", "Simple Grid", "Data Grid", "Chat", "AI Chat" (which is highlighted with a blue background), and "AI Chat & Context". The main content area is titled "AI Chat" and shows a conversation between "You" and "Assistant".

You 2025-09-18 11:35
Tell me something about Vaadin

Assistant 2025-09-18 11:35
Vaadin is an open-source web application framework that allows developers to build user interfaces in Java. It is particularly known for its ability to create modern, responsive web applications without requiring extensive knowledge of front-end technologies like HTML, CSS, or JavaScript. Instead, developers can write their UI logic in Java, which Vaadin then translates into web-compatible code.

Key features of Vaadin include:

- 1. Java-Based Development:** Vaadin allows developers to write their UI code entirely in Java, making it accessible for those who are more familiar with Java than with web technologies.
- 2. Rich UI Components:** Vaadin offers a wide range of pre-built UI components, including grids, forms, charts, and more, which can be easily customized and extended.
- 3. Server-Side Architecture:** Vaadin operates primarily on the server-side, which means that the application logic and state are managed on the server. This can simplify application development by reducing the complexity of client-side programming.
- 4. Responsive Design:** Vaadin applications are designed to be responsive and work across different devices and screen sizes, ensuring a good user experience on both desktop and mobile platforms.
- 5. Integration Capabilities:** Vaadin can be integrated with various back-end technologies and databases, making it suitable for enterprise applications. It also supports popular frameworks like

Message Send

DEMO VII

AI Chat Bot with UI Interaction

The screenshot displays a web application titled "AI Chat with Context" running on "localhost:8080/chat-ai-with-context". The interface includes a sidebar with a navigation menu and a main content area.

Sidebar:

- entwickler Summit '25
- Empty
- Hello World
- Person Form
- Simple Grid
- Data Grid
- Chat
- AI Chat
- AI Chat & Context** (highlighted)

Main Content Area:

Conference Talks

Category	Topic	Speaker	Language
Web Frontend	Accessibility First: Dar...	Sophie Lang	Deutsch
Backend & Cloud	Serverless Patterns a...	Michael Berger	Deutsch
<input checked="" type="checkbox"/> Backend & Cloud	Kubernetes für Fortge...	Arjun Patel	Englisch
<input checked="" type="checkbox"/> Backend & Cloud	Event-Driven Architec...	Monika Nowak	Englisch
Backend & Cloud	Spring Boot 4: Die ne...	Sebastian Krause	Deutsch
<input checked="" type="checkbox"/> Backend & Cloud	Rust im Backend: Hig...	Olivia Chen	Englisch
Backend & Cloud	Cloud-Native Observa...	Felix Brandt	Deutsch
<input checked="" type="checkbox"/> Backend & Cloud	CQRS & Event Sourci...	Johan Svensson	Englisch

Message History:

You 2025-09-18 11:36
Highlight all conference talks about Cloud which are in English

Assistant 2025-09-18 11:36
All conference talks about Cloud that are in English have been successfully highlighted. Here are the details:
1. Kubernetes für Fortgeschrittene: Operatoren entwickeln

Message Clear

RETHINKING UI

X-UI Modality for AI Agents

Human Computer Interaction
Computer Human Interaction

Visit the prototype playground at
computerhumaninteraction.com



Where to go from here?

Get started with Vaadin

Create your own starter project
start.vaadin.com

start.spring.io
(add Vaadin dependency)

More starters and templates
(Spring, CDI, Gradle, Quarkus, ...)
github.com/vaadin

Tutorials & Documentations
vaadin.com/start
vaadin.com/docs

Get help
vaadin.com/forum

Github, Stack Overflow

Where to go from here?

Get started with Vaadin



[Conference Slides](#)
[Demo Project](#)

[github.com/jtremel/
entwickler-summit-
showcase](https://github.com/jtremel/entwickler-summit-showcase)

Meet us at
Vaadin Create 2025
in Frankfurt
Oct 21-22, 2025

[vaadin.com/vaadin-
create-2025](https://vaadin.com/vaadin-create-2025)

Thank you

Feel free to
reach out!

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linkedin.com/in/jtremel