{mfs.js}

Modern Full-Stack JavaScript

Cody Zuschlag

codyzus

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Developer Relations Engineer **@NearForm**
University Instructor @ Université Savoie Mont Blanc

France

How we imagine our next project...

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...reality
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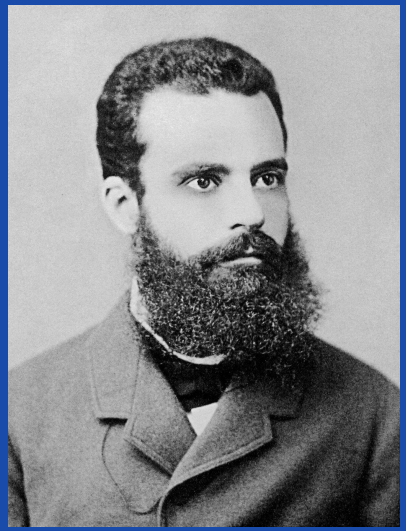
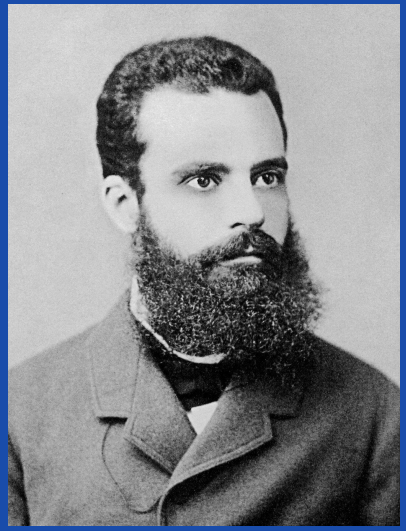


For many outcomes, roughly 80% of consequences come from 20% of causes (the "vital few")

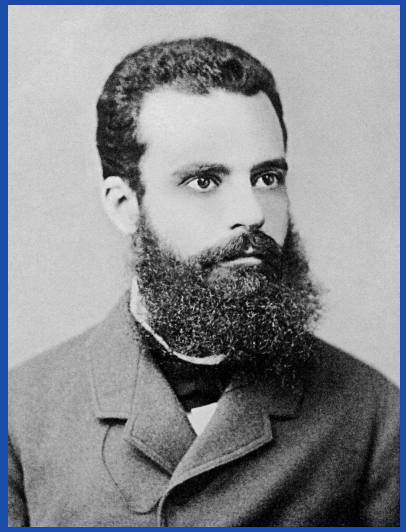
– Pareto Principle



Vilfredo Pareto

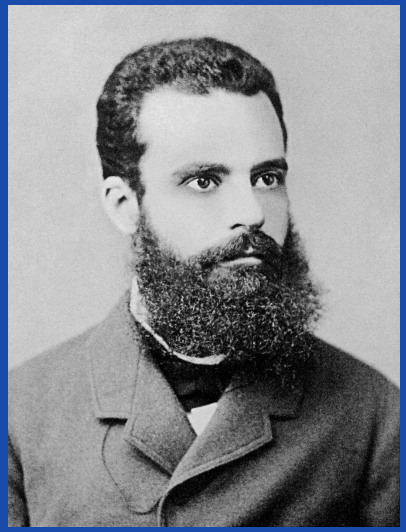
0%

For many outcomes, roughly 80% of consequences come from 20% of causes (the "vital few")
– Pareto Principle

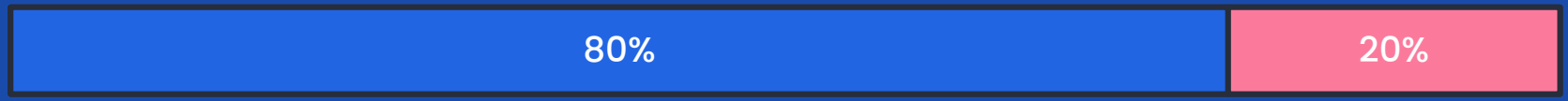


Vilfredo Pareto

For many outcomes, roughly
80% of consequences come from
20% of causes (the "vital few")
– Pareto Principle

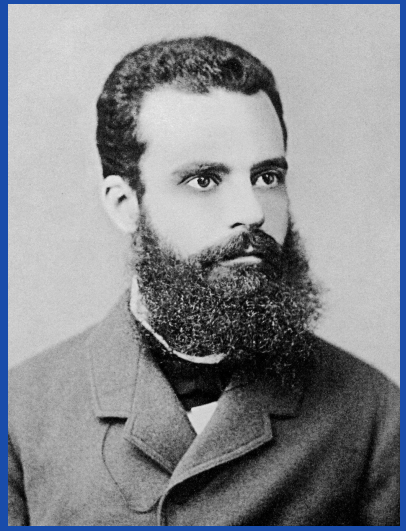


Vilfredo
Pareto

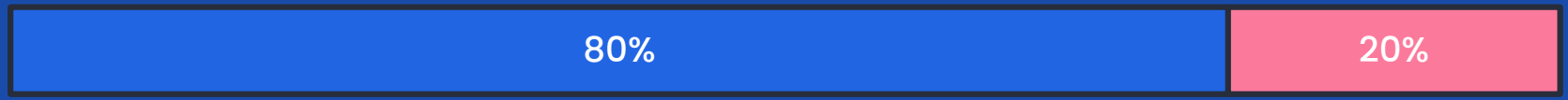


For many outcomes, roughly 80% of consequences come from 20% of causes (the "vital few")

- Pareto Principle



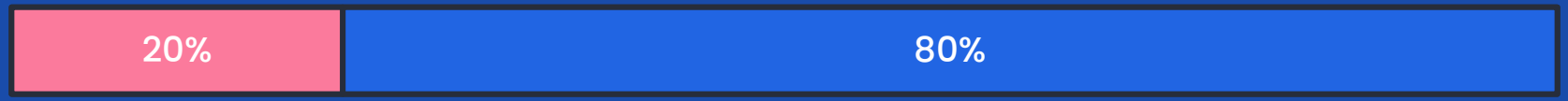
Vilfredo Pareto



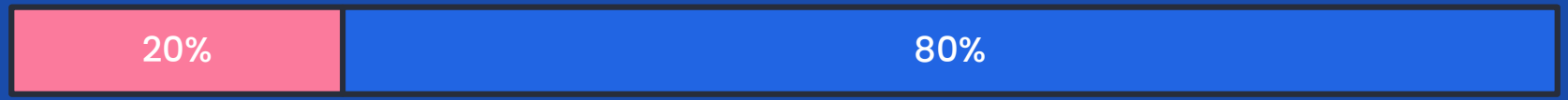
Steve Jobs returns to Apple in 1996...

Steve Jobs returns to Apple in 1996...

...and cuts the product models in all categories down to 1 (or none)



Focus on the hard 20%...



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...gain 80% in productivity?

How can we build a stack that works for the real world?


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Modularity wins
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DevEx matters
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Community first
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Transparency counts
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The stack

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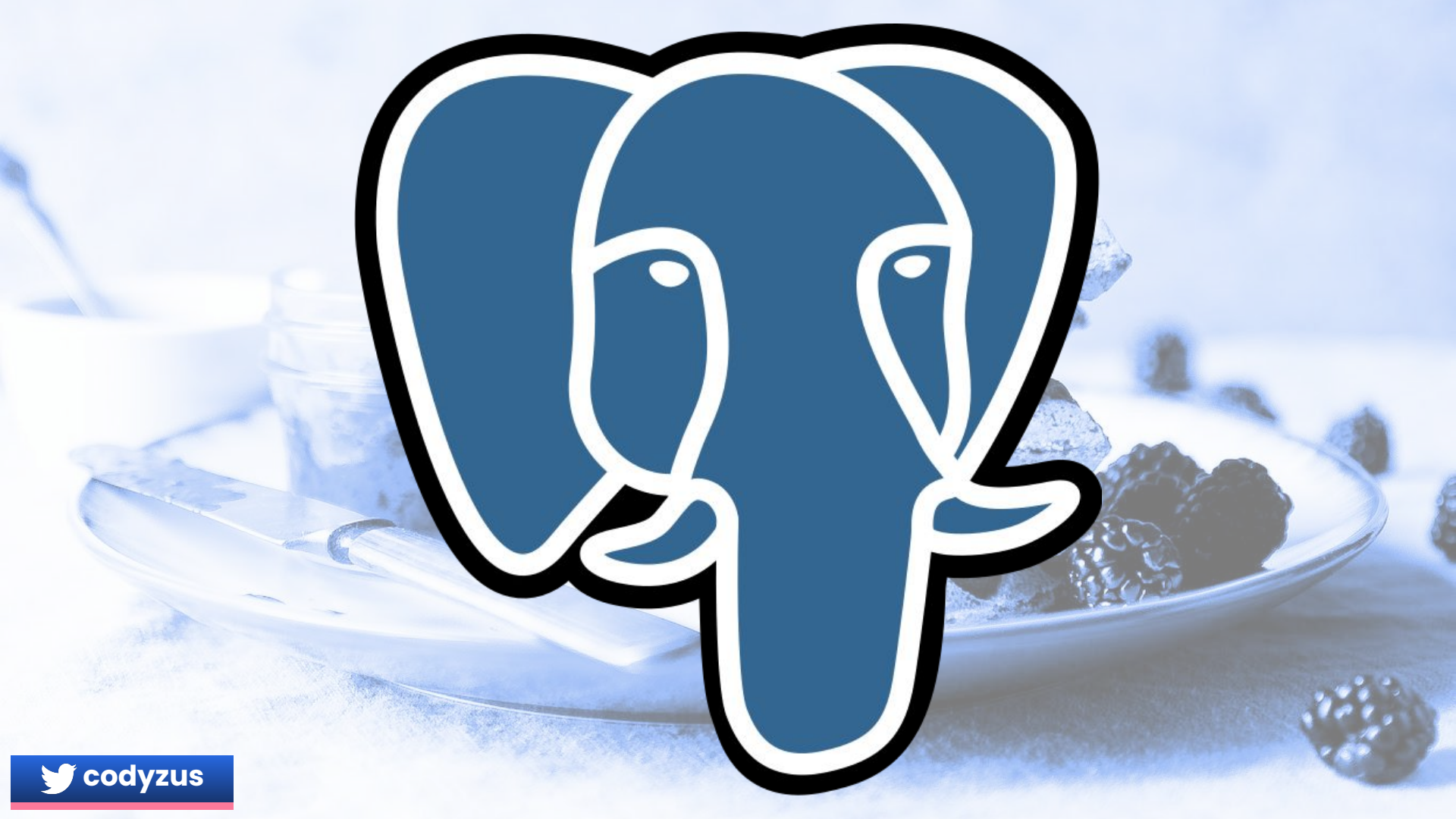

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Database Layer

PostgreSQL

Developer Knowledge

Devs know it today and can design systems with it now

Super powers

Best RDB + NoSQL ready
Supports connection pooling (massive scaling)

DevEx

Run anywhere, locally or otherwise 🧘
SQL is crazy powerful

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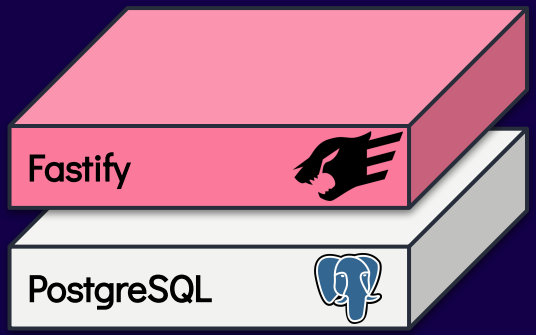
Server Layer

Fastify



Developer Knowledge

Inspired by hapi and familiar to express devs

Super powers

Monolith today, services tomorrow (Conway)
Insane scaling

DevEx

Run anywhere, locally or otherwise 🧘
Plugin architecture is programming zen

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Mercurius

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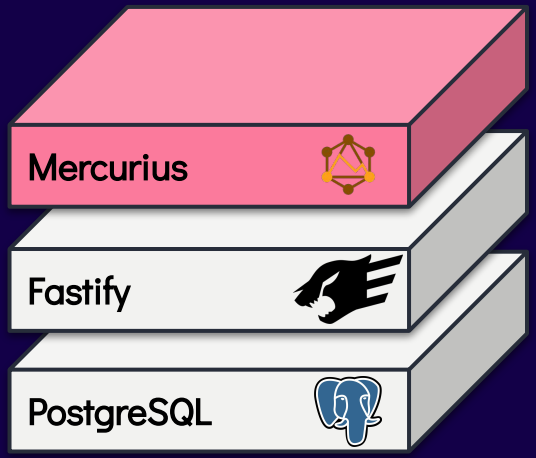
API Layer

Mercurius



Developer Knowledge

Solves real-world graphQL challenges out of the box

Super powers

Caching, federation, authentication, subscription, file uploads 🤯

DevEx

Integrates graphiql
Loaders support built-in

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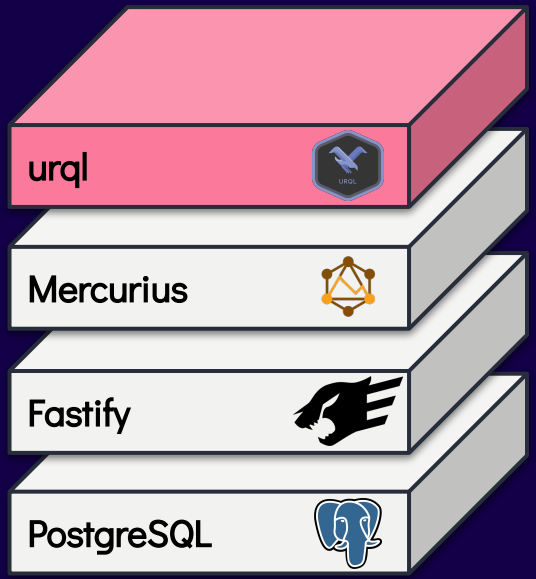
URQL

API Client

urql



Developer Knowledge

Works with the major front-end libs

Super powers

Caching, offline support, subscriptions, uploads, exchanges architecture, SSR

DevEx

Hooks API 🧘

Devtools

```
const pizzasQuery = `query {
  pizzaList {
    id
    name
    toppings {
      id
      name
    }
  }
}`;
```

```
export default function PizzaList() {
  const [result, reexecuteQuery] = useQuery({
    query: pizzasQuery,
  });

  const {data, fetching, error} = result;

  if (error) {
    return <span>something went wrong: {error.message}</span>;
  }

  if (fetching) {
    return <span>Loading...</span>;
  }

  return (
    <Container>
      <Row>
        {data.pizzaList.map((pizza) => (
          <Col key={pizza.id}>
            <Pizza {...pizza} />
            <Link to={`/pizza/${pizza.id}`}>Details</Link>
          </Col>
        ))}
      </Row>
    </Container>
  );
}
```

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```
const pizzaQuery = `query($pizzaId: Int!) {
  pizza(id: $pizzaId) {
    id
    name
    toppings {
      id
      name
    }
  }
}`;
```

```
export default function PizzaDetails({pizzaId}) {
  const [result, reexecuteQuery] = useQuery({
    query: pizzaQuery,
    variables: {pizzaId},
  });

  const {data, fetching, error} = result;

  if (error) {
    return <span>something went wrong: {error.message}</span>;
  }

  if (fetching) {
    return <span>Loading...</span>;
  }

  return <Pizza {...data.pizza} />;
}
```

client

server

Pizzas

Pizza

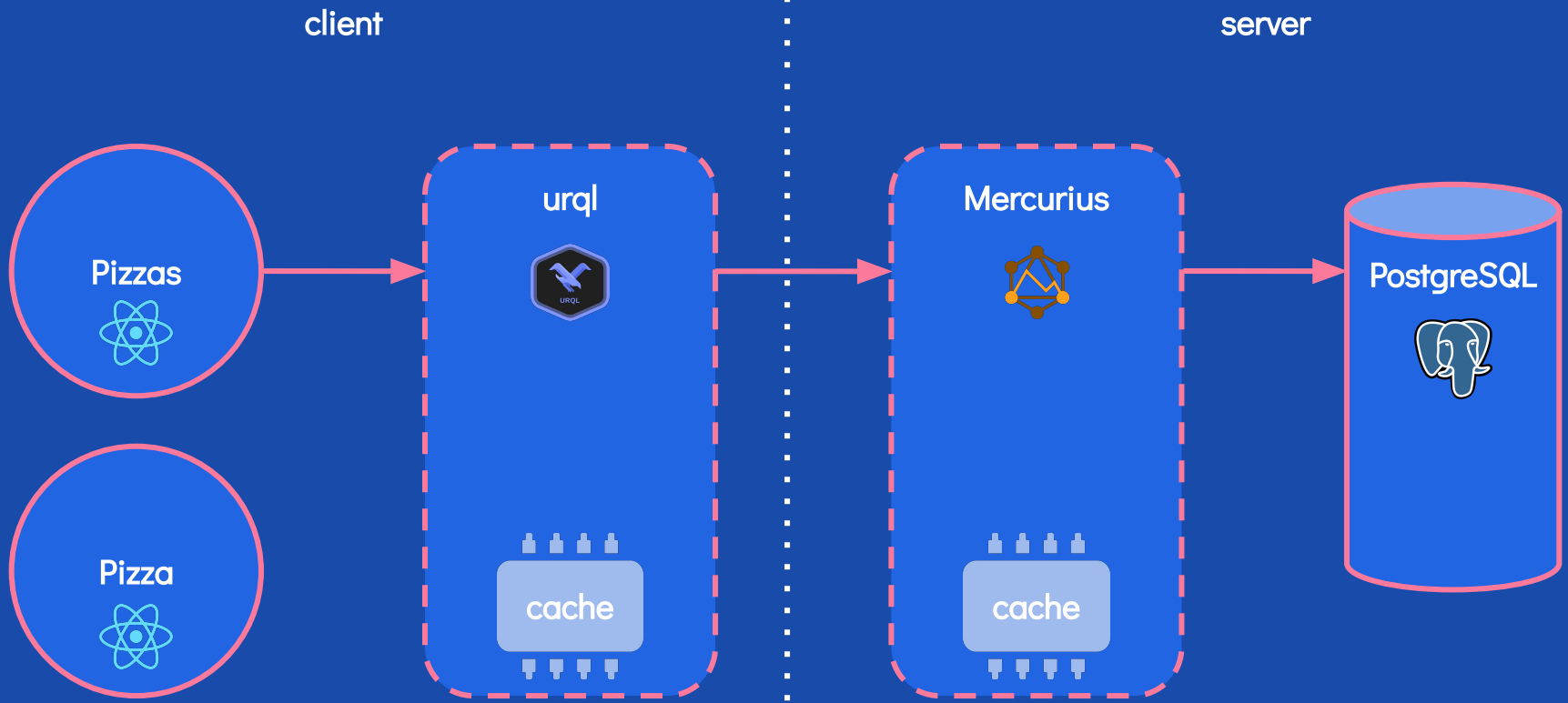
urql

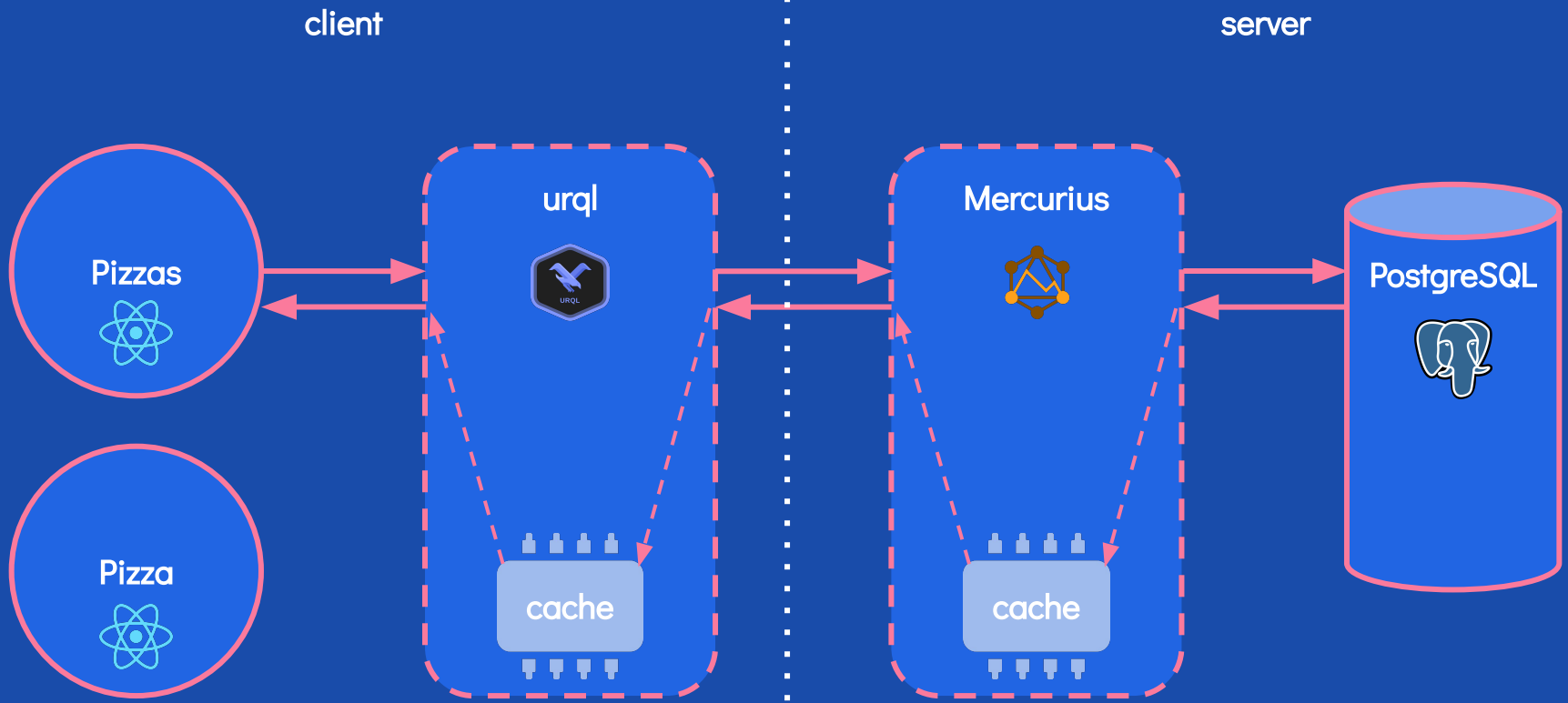
cache

Mercurius

cache

PostgreSQL


client
server
Pizzas
Pizza
urql
URQL
cache
Mercurius
cache
PostgreSQL


client
server
Pizzas
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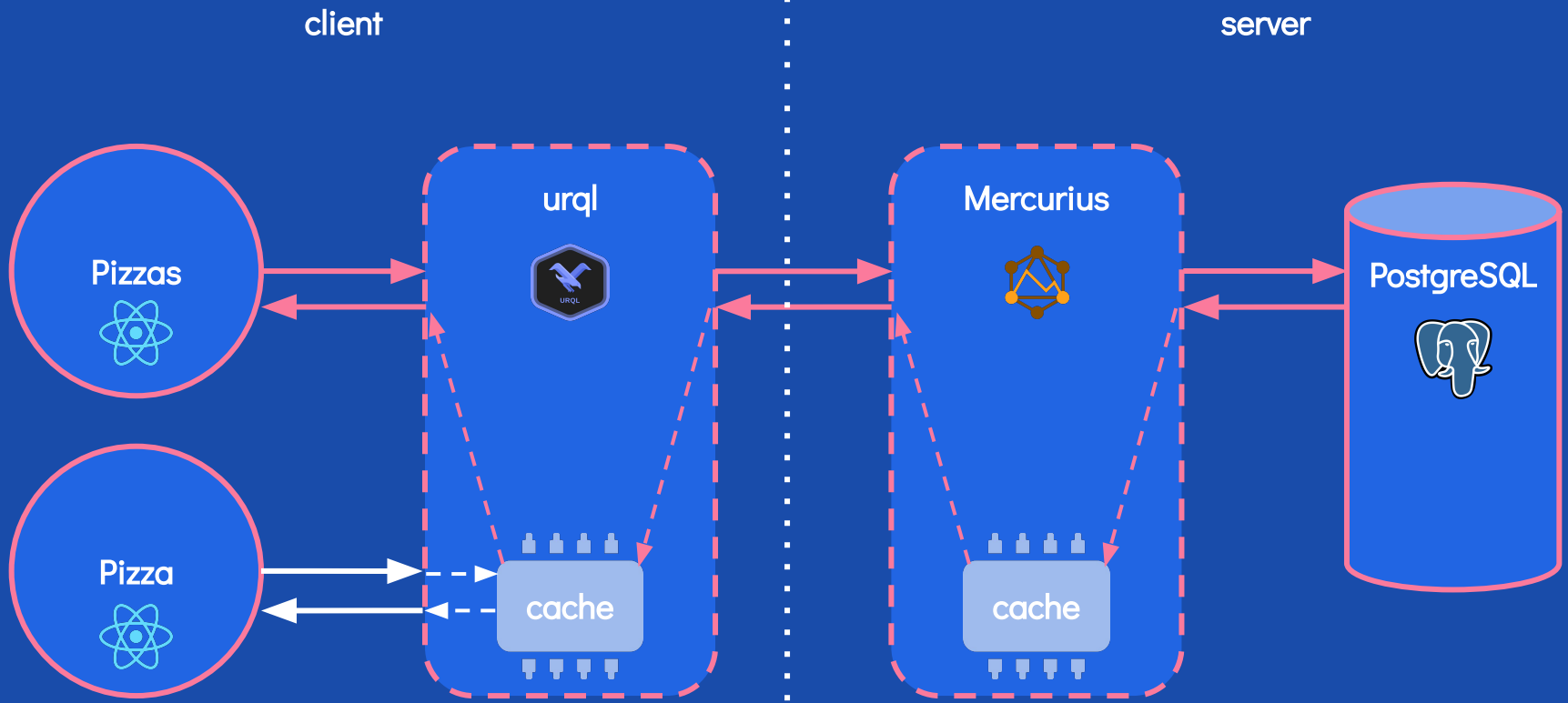
client
server
Pizzas
Pizza
urql
cache
Mercurius
cache
PostgreSQL

graphQL APIs that match your business domain...


BAD ASS
MOTHER FUCKER
makeameme.org

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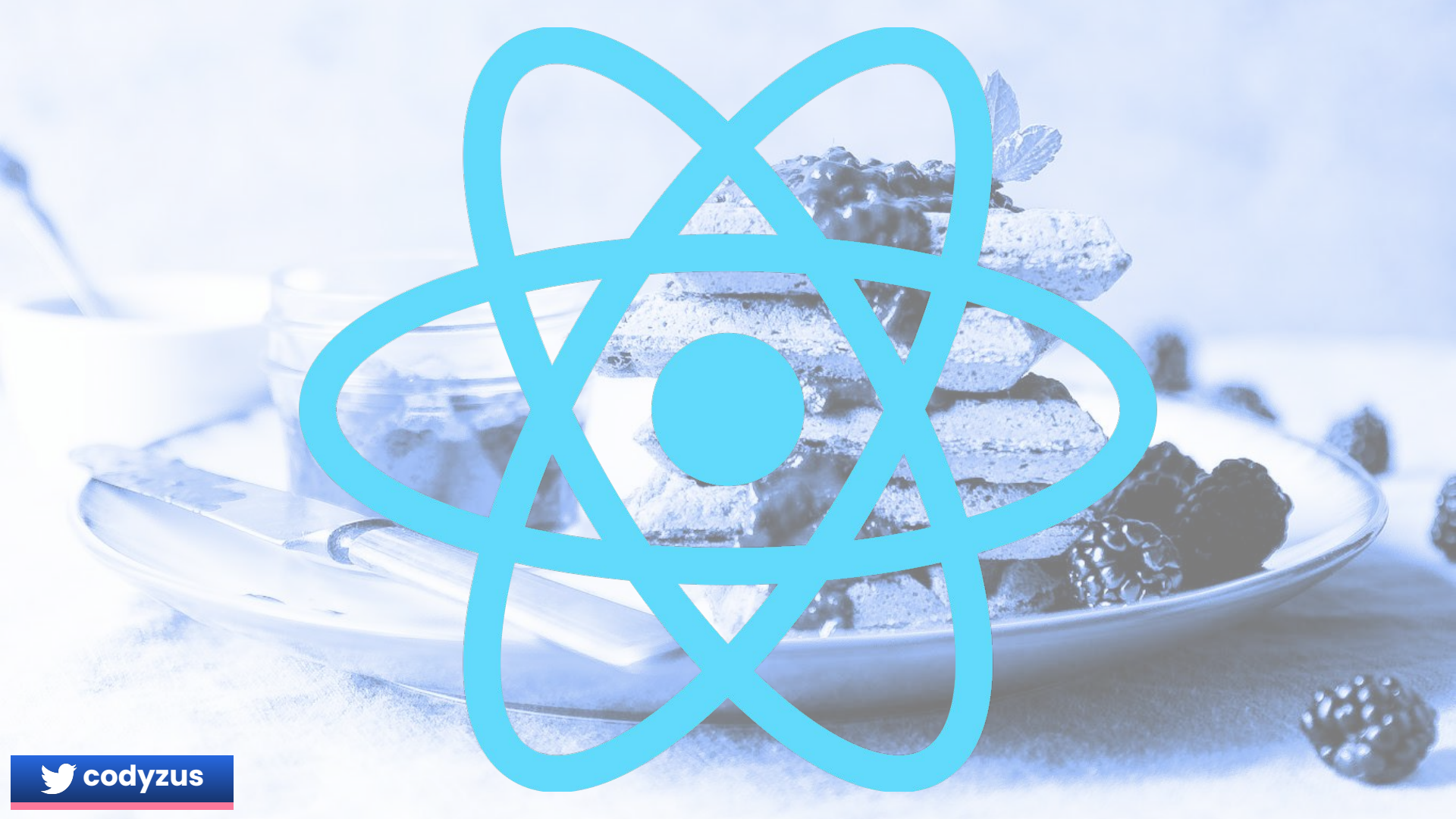

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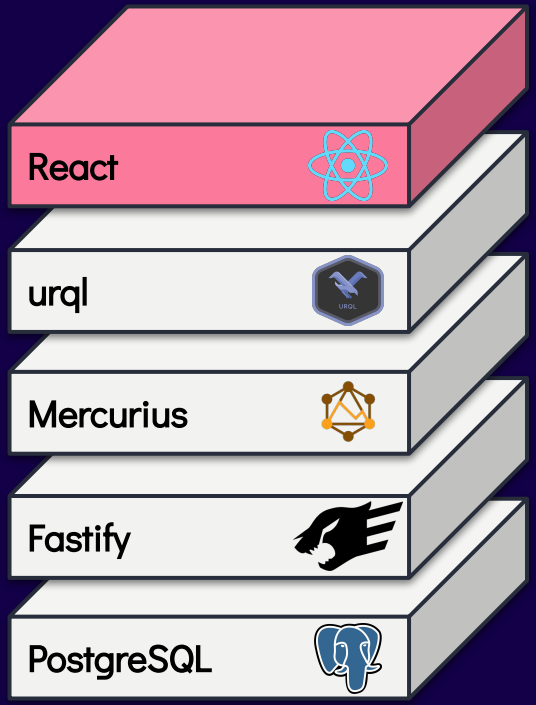
UI Layer

React



Developer Knowledge

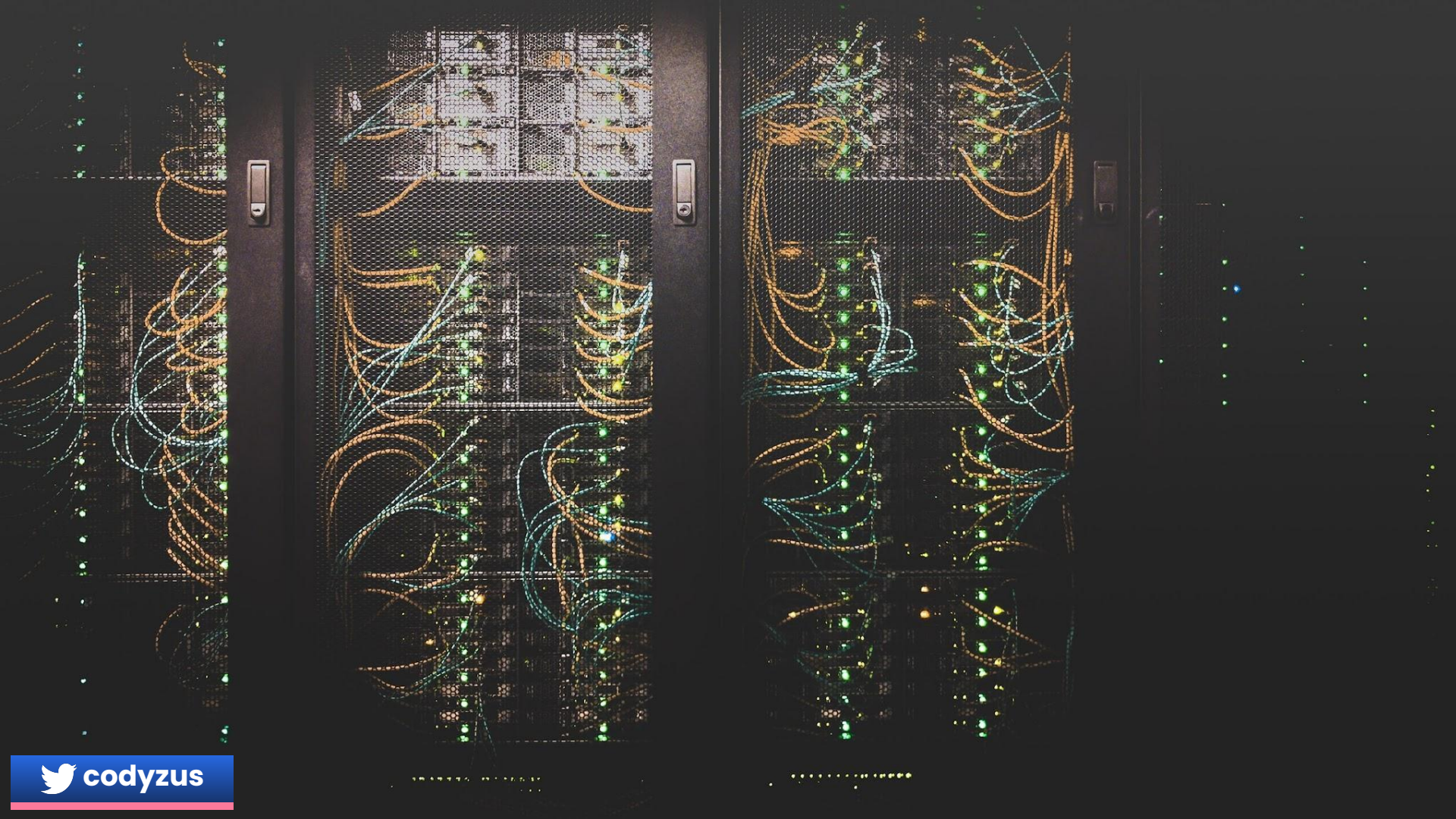
Umm... its React!
Devs know it

Super powers

Evolving yet stable, components first, hooks

DevEx

Devtools
Vite! Just use it.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SSR

fastify-vite

Developer Knowledge

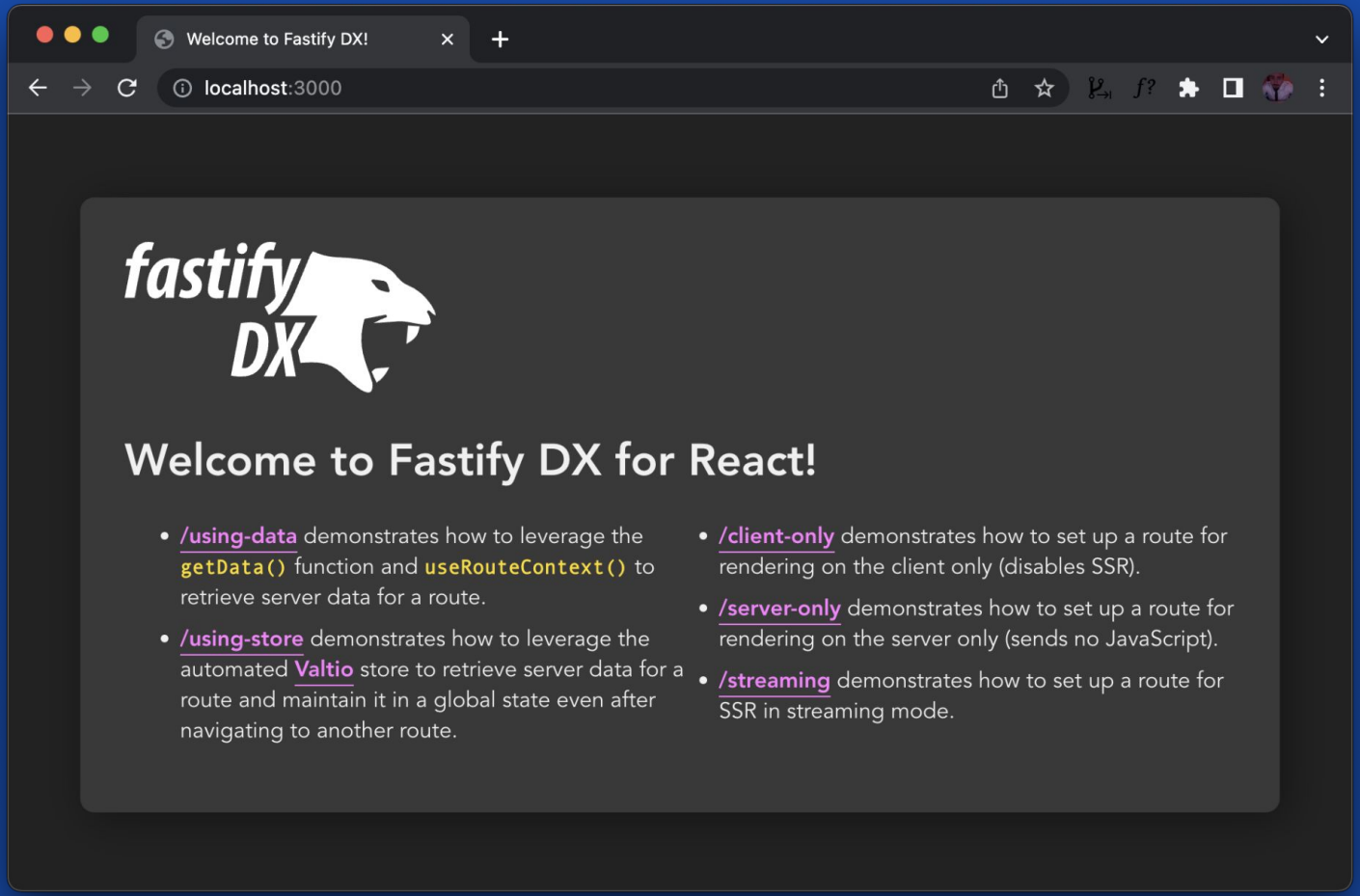
Works with major front-end libs

Super powers

Handles page level templating
Integrates client routing into fastify server routes

DevEx

Highly customizable
No magic


Welcome to Fastify DX!
localhost:3000
fastify DX
Welcome to Fastify DX for React!
/using-data demonstrates how to leverage the getData() function and useRouteContext() to retrieve server data for a route.
/using-store demonstrates how to leverage the automated Valtio store to retrieve server data for a route and maintain it in a global state even after navigating to another route.
/client-only demonstrates how to set up a route for rendering on the client only (disables SSR).
/server-only demonstrates how to set up a route for rendering on the server only (sends no JavaScript).
/streaming demonstrates how to set up a route for SSR in streaming mode.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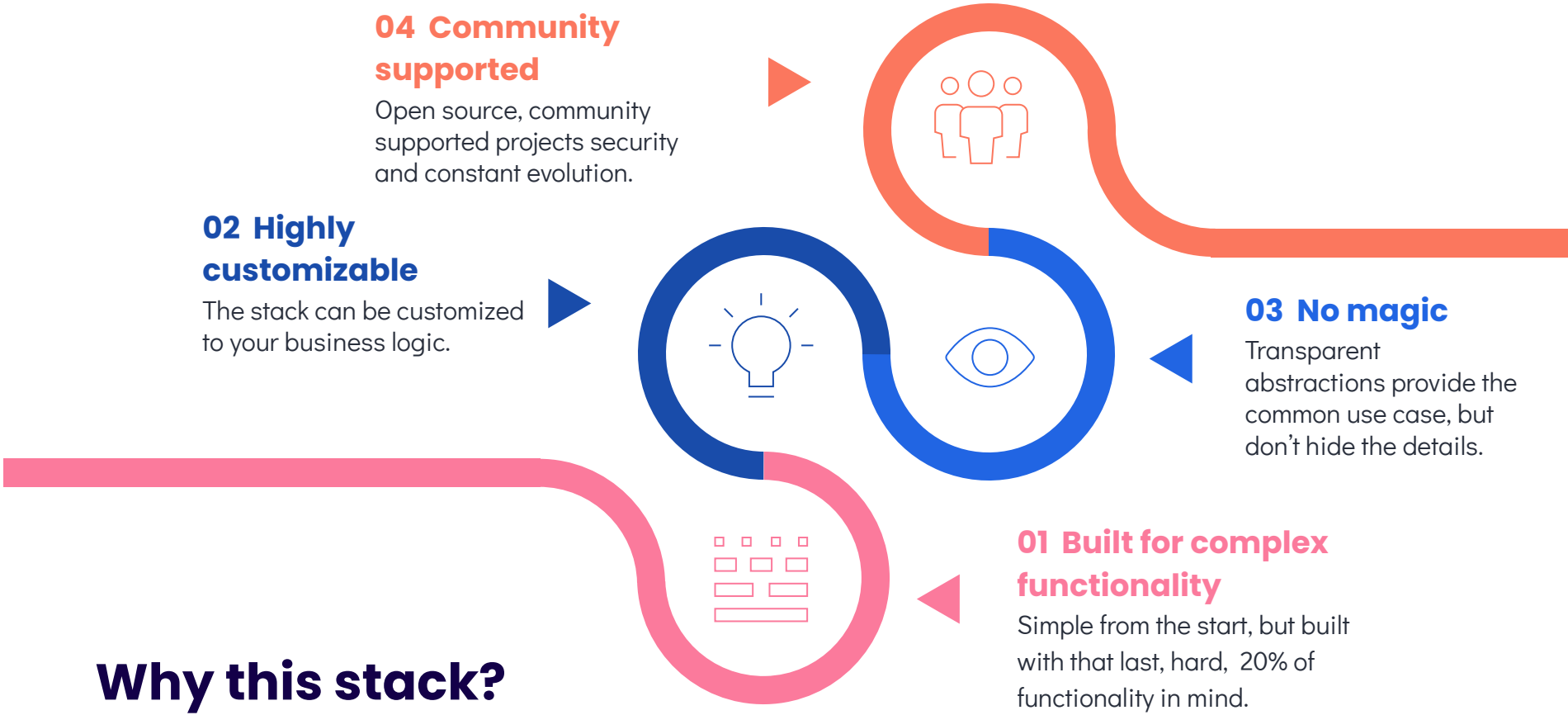
Why this stack?



04 Community supported

Open source, community supported projects security and constant evolution.

02 Highly customizable

The stack can be customized to your business logic.

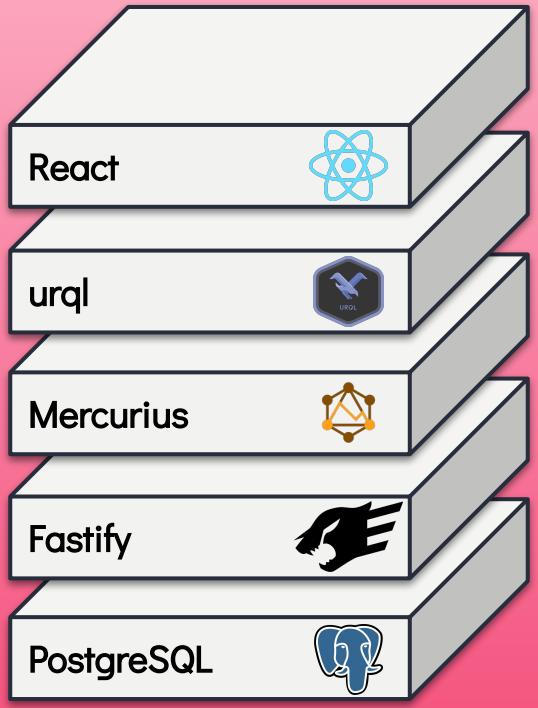
03 No magic

Transparent abstractions provide the common use case, but don't hide the details.

01 Built for complex functionality

Simple from the start, but built with that last, hard, 20% of functionality in mind.

LEAN, MEAN, JAM, ...



???

WE'RE BOLD
WE'RE FLEXIBLE
WE'RE OPEN
WE'RE EMPOWERING

Global Delivery Org with 300+ and counting

We are hiring!

Major Contributors to the Open Source Web Platform

NPM monthly downloads

1B

Represents modules used globally

8%

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Questions?