

# Enhancing business applications success

A guide for back-end developers  
on UX impact

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Operations Manager



# ABOUT ME

- In the industry since 2004
- Started as a web full-stack developer
- Experienced the freelancer perspective ~ 1.5 years
- Employee for two other companies
- Joined Wayfare in December 2012
  - Web developer
  - Project Manager / Scrum Master
  - Operations Manager / Business development



# ABOUT WAYFARE

We've supported businesses of different sizes and across multiple industries to achieve their goals.

## TOP TALENT, SHARED KNOWLEDGE, CLOSE COLLABORATION

Our cost-effective solutions and active community engagement foster innovation and efficiency.

We offer tailored services including **Modernization, New Development, Maintenance & Support, Quality Assurance, UI/UX Design, Consultancy and Project Delivery.**

**12+**  
**YEARS EXPERIENCE**

**10+**  
**YEARS**  
**LONGEST PARTNERSHIP**

**50+**  
**SATISFIED CUSTOMERS**

**100+**  
**PROFESSIONALS**

## OUR EXPERTISE

### PROGRESS

OpenEdge, CorticonJS, Sitefinity

**MOBILE** React Native

**DEVOPS** Docker, Kubernetes, Jenkins

**MANUAL AND AUTOMATION TESTING**

### WEB TECHNOLOGIES

Angular, React, Vue.JS, NodeJS, JS, TypeScript, Java, .Net

**CLOUD** AWS, Azure, Google Cloud Platform

**UI/UX** Figma, XD, Zeplin, Illustrator

**LOW CODE/ NO-CODE FRAMEWORKS**



# Agenda

**The What**

**The Link**

**The How**

**The Playlist**

**The Gaps**

**The Key**

**The Others**

**The Q & A**

**The End**

# THE WHAT

## User Interface

The user interface (UI) in the software industry refers to the point of interaction between users and computers, consisting of all visual and interactive elements that facilitate this interaction.

This includes display screens, buttons, icons, and other components that users engage with when using applications or websites.



### UI Types

- GUI - Graphical User Interface
- CLI - Command-Line Interface
- VUI - Voice User Interface
- NUI - Natural User Interface

### Key Components

- Navigational Elements
- Input Controls
- Informational Components
- Containers

### Importance / Benefits

- User Engagement
- Usability
- Brand Credibility
- Change Adoption

# THE WHAT

## User Experience

User Experience (UX) refers to the overall experience a user has when interacting with a software product or system, focusing on how easy, efficient, and pleasant the interaction is.

The primary goal of UX design is to create products that are useful, usable, and satisfying for users. UX design focuses on the overall feel of the product, ensuring the user's interaction with the system is meaningful and relevant.

### Key Elements

- Usability
- Accessibility
- Information Architecture
- Interaction Design
- User Research
- Prototyping and Testing

### Importance / Benefits

- Increased User Satisfaction
- Improved Conversion/Adoption Rates
- Cost Efficiency
- Competitive Advantage



# THE WHAT

## UI vs. UX

In software development, UI design works closely with User Experience (UX) design, where UI focuses on the look and feel of the interface, while UX ensures that the product is intuitive, efficient, and enjoyable to use.

UX is broader than UI design, which deals specifically with the visual and interactive elements; UX looks at the entire process, from initial contact with the product to ongoing use and potential issues.

Both UI and UX are interdependent; a poor UI can lead to a negative UX and vice versa.

By focusing on the user's perspective, businesses can enhance satisfaction, drive engagement, and achieve better overall outcomes for their digital products



# THE WHAT

## Back-end Developer

A back-end developer is a professional responsible for the server-side logic and architecture of web applications.

They play a crucial role in ensuring that the front-end of an application (the part users interact with) functions smoothly by managing the underlying processes that support it.

They focus on building and maintaining databases, servers, and application logic. They handle the data processing, business logic, and system integration that power the functionality of an application.

### Key Responsibilities

- Server-side Logic
- Database Management
- APIs
- Authentication and Authorization
- Performance Optimization
- Security
- Version Control
- Integrations





# THE LINK

UI/UX design is critical for standing out in the market, its significance is often overlooked.

This is particularly true for back-end developers, who may not traditionally prioritize user experience (UX).

Back-end developers play a critical, though often indirect, role in shaping the UI (User Interface) and UX (User Experience) of software and business products.

Their contributions primarily center around how the back-end system supports the user interface and enables a seamless, efficient experience for users.



# THE LINK

The user interacts and explores just with the final product, the user sees only the output (the deliverables), without knowing (or even caring) about what's "under the hood", in the back-end.

But "under the hood" is where the "magic" happens!



# THE HOW

## API Design and Performance

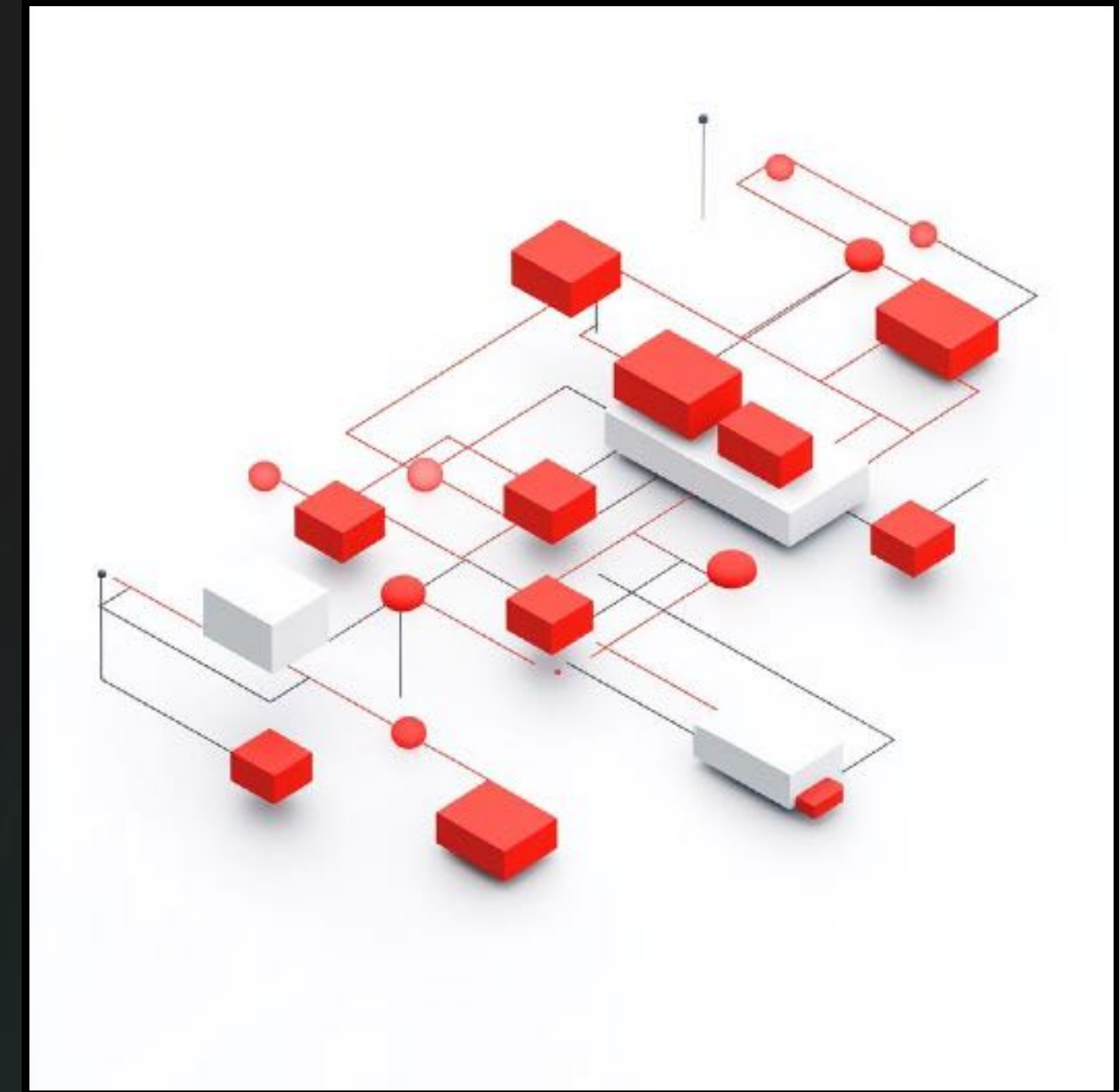
- Efficient Data Retrieval
- Consistency in Data
- Security and Permissions



# THE HOW

## Error Handling and Feedback

- Meaningful Error Messages
- Resilience and Reliability



# THE HOW

## Scalability and Performance

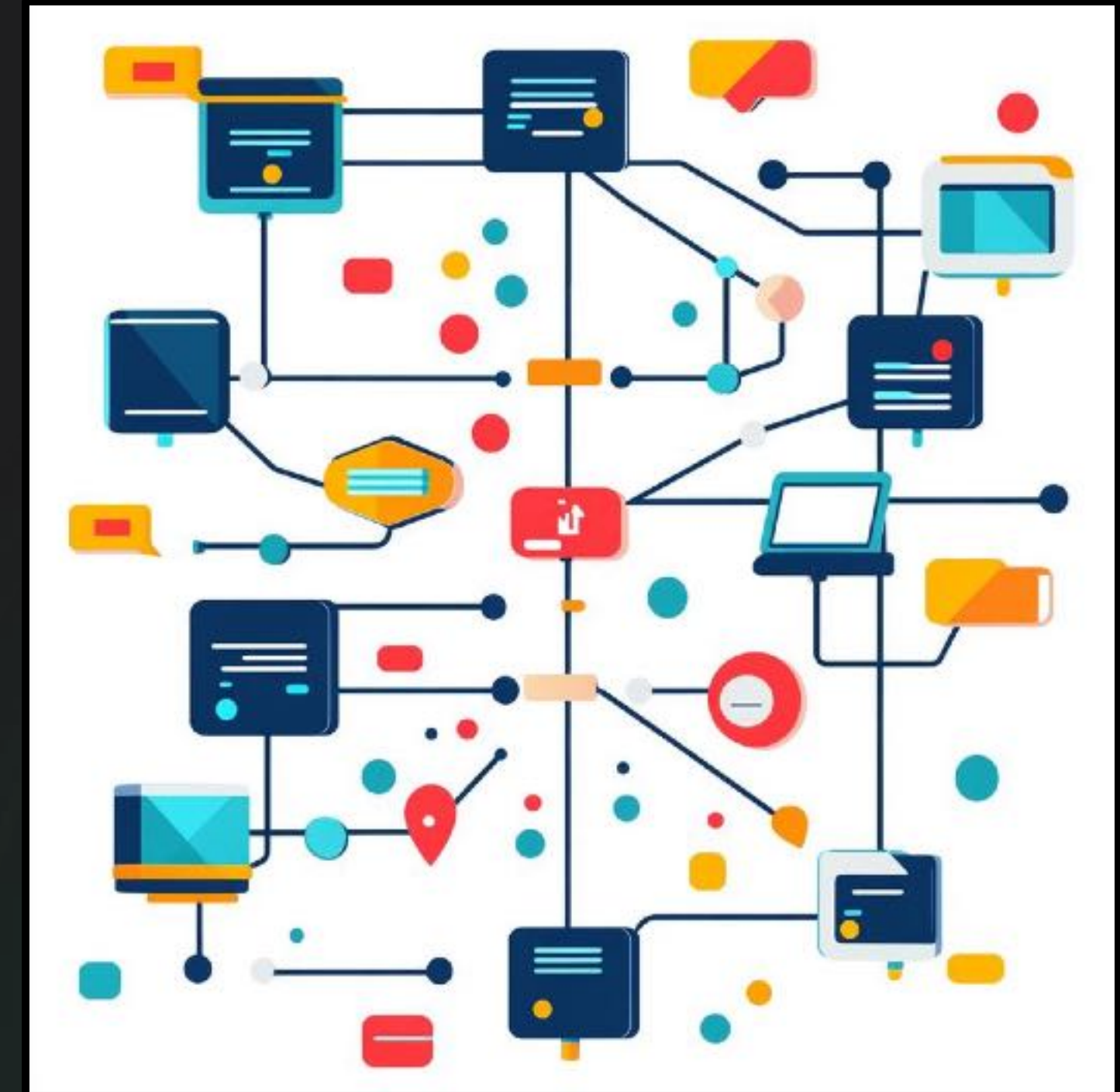
- Page load times
- Caching and load balancing



# THE HOW

## Data Structure and Access

- Data Modeling and Organization
- Data Relationships and Logic



# THE HOW

## Customisation and Personalisation

- User Preferences
- Localisation



# THE HOW

## Authentication and User Flows

- Login and Signup Processes
- Session Management





# THE HOW

## Support for Real-Time Features

- Web Sockets and Push Notifications
- Asynchronous Processes



# THE HOW

## Collaboration with Front-End Developers

- API Contracts and Prototyping
- Feedback Loops



# THE GAPS

- Prioritization of Technical Constraints vs. User Needs
- Different Interpretations of "Performance"
- Data Structure vs. Usability
- Handling of Edge Cases and Error States
- Real-Time Features and Expectations
- Time to Implement Features
- Scalability vs. Flexibility
- Focus on Security vs. Usability
- Technical Lingo vs. User-Centered Language
- Responsibility for Performance Optimization

# THE GAPS

## Prioritization of Technical Constraints vs. User Needs

Tension arises when a feature is technically difficult to implement, and back-end developers may downplay its importance, while UX designers see it as critical for user satisfaction.

# THE GAPS

## Different Interpretations of "Performance"

Back-end developers may optimize for back-end performance but not realize that slow, intermittent data delivery to the front end still causes a poor user experience. UX designers might request performance improvements not aligned with back-end optimization priorities, such as reducing the perceived delay between actions.

# THE GAPS

## Data Structure vs. Usability

UX designers may expect the back-end to serve data in a format that is easy to display, while back-end developers might prioritize a structure that makes sense from a system perspective but is harder to work with for the UI. This can lead to frustrations when front-end teams must manipulate raw data significantly to achieve the desired experience.

# THE GAPS

## Handling of Edge Cases and Error States

Back-end developers might provide vague or generic error messages (e.g., “500 Internal Server Error”), expecting front-end developers to handle them. Meanwhile, UX designers want clear, user-friendly feedback that helps users understand what went wrong and what they can do to resolve the issue.

# THE GAPS

## Real-Time Features and Expectations

The difficulty in implementing real-time features is often underestimated by UX experts, while back-end developers might not fully appreciate how real-time interaction impacts user engagement and satisfaction.



# THE GAPS

## Time to Implement Features

UX experts may become frustrated when seemingly minor changes (e.g., adding a new data field or updating a user flow) take longer than expected because they require back-end modifications. Back-end developers may feel pressured to speed up processes without cutting corners, leading to friction.

# THE GAPS

## Scalability vs. Flexibility

A back-end system optimized for scalability may feel too rigid from a UX perspective, making it difficult to customize or create unique user experiences. Back-end developers may resist changes that introduce variability or complexity, as it could negatively affect the system performance or scalability.

# THE GAPS

## Focus on Security vs. Usability

UX experts might see security protocols as overly difficult for the end-user, while back-end developers see them as essential. The challenge is balancing security with usability, and disagreements can arise when one side underestimates the other's priorities.

# THE GAPS

## Technical Lingo vs. User-Centered Language

A disconnect can occur when back-end developers provide technical explanations that don't align with how UX designers want to communicate with end users, leading to confusion in translating back-end functionality into user-friendly terms.

# THE GAPS

## Responsibility for Performance Optimization

There can be confusion over who is responsible for improving performance. Back-end developers might believe they've done enough to optimize data delivery, while UX designers may think the issue lies in how the data is handled on the back end.

# The Key Takeaway

True,

Back-end developers  
**don't**  
directly create  
**UI elements**

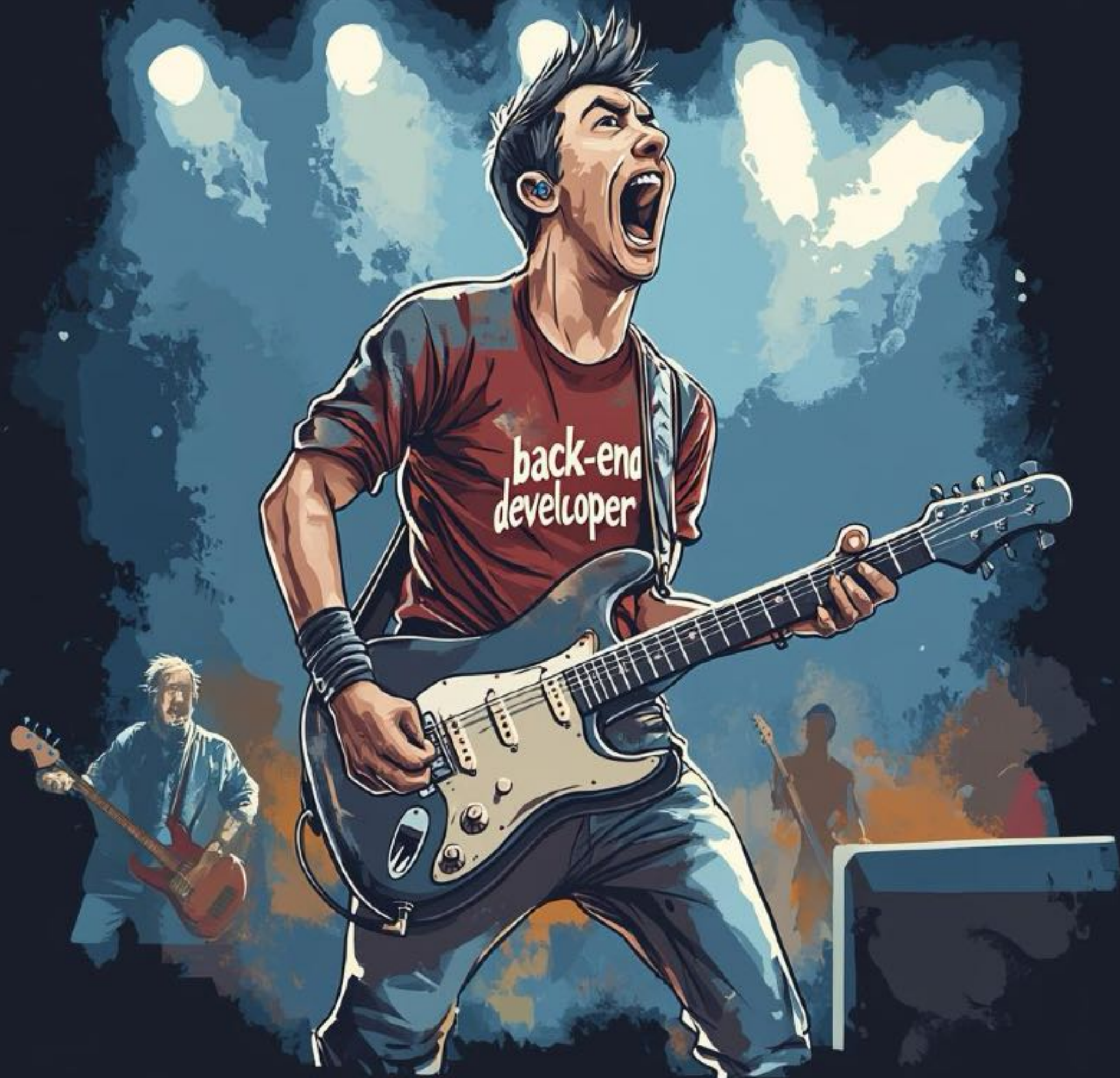
but ...

Back-end developers' contribution is

**fundamental**  
to the product's overall  
**performance,**  
**security,**  
**reliability**

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**Crucial**  
to delivering  
**great UX!**



You  
Rock!

# THE OTHERS

## DevOps

Reducing development and delivery time.

## Front-End developers

Implementing the user interface, the designs, created by UI and UX, translating them into functional interfaces.

## Architects

Finding simple, more viable and resilient solutions.

## Quality Assurance Testers

Essential for the product ensuring the the product meets usability standards.

## UI Designers

They focus on the visual aspect of the product

## Product Managers

PMs are bridging the gap between user needs and business objectives.

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## Team Work





**THANK YOU**

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