

The background of the slide is a dark grey or black color, covered with a repeating pattern of small, light grey icons. These icons represent various digital and technological concepts, such as social media, communication, data, and user interface elements. The icons are scattered across the entire background, creating a textured, modern aesthetic.

From punch cards to AI's upcoming revolution

Boris Martinović

Hi, I'm Boris.

- Software Engineer
@Euroherc Insurance
- Lecturer
(Frontend) @Algebra
- Google Developers
Group Zagreb

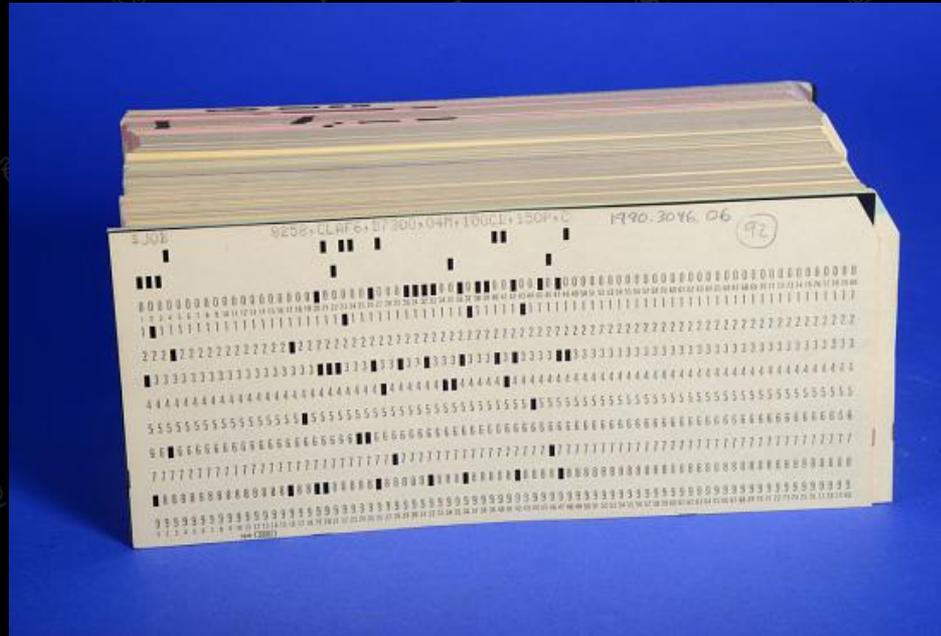
Today's agenda

- How our development practices changed over time
- What is the current state of affairs (without AI)
- AI's upcoming revolution

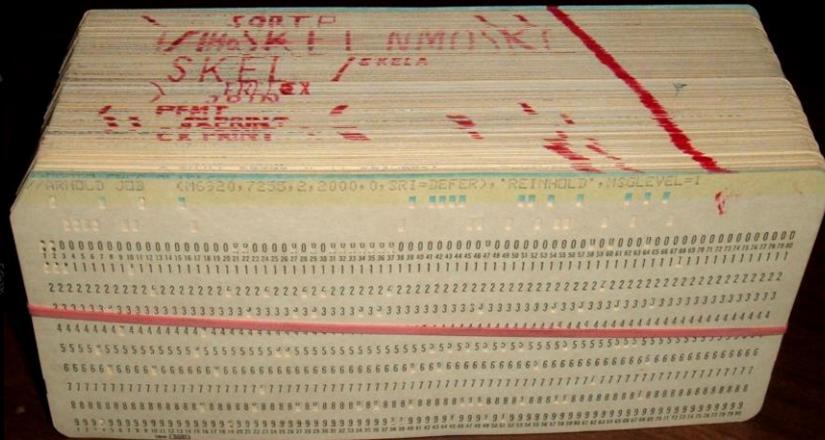
The background is a dark grey or black color, covered with a repeating pattern of small, light grey icons. These icons represent various digital and technological concepts, such as social media, communication, and business. The text is centered on the page in a large, bold, white font.

How our development practices changed over time

In the beginning... there were cards



In the beginning... there were cards



Screens? Now we're getting somewhere



IDEs? Sign me up!

```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: TURBO
File Edit Search Run Compile Debug Tools Options Window Help
\TPWDB\DOC\WELCOME.TXT 1-[+]
Welcome to Turbo Pascal (With DOSBox)
Free compiler and development environment for Pascal
Copyrights (C) 2017-2020. Luu Nguyen Thien Hau.
Free and open-source under the terms of MIT License.
Version 7.3.4

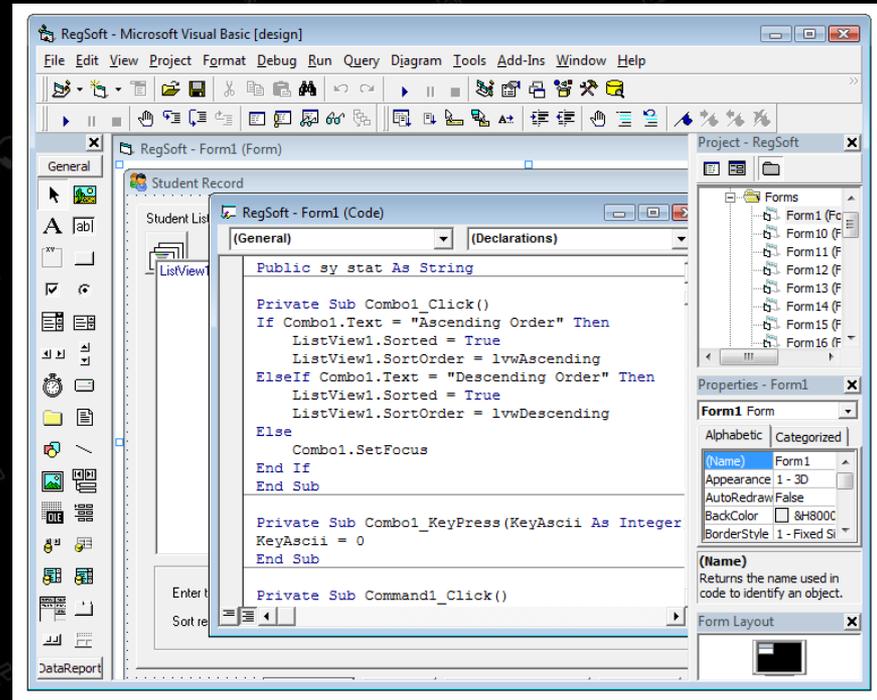
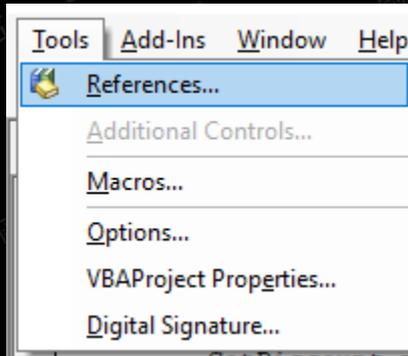
++ IMPORTANT NOTICE BEFORE USING THE SOFTWARE:
+ Do not click away from the software window if you are running the program,
including using the key combination to switch the Alt + Tab window,
otherwise you will not be able to click on the menu bars and other
components in Turbo Pascal.

+ It is recommended to save files before and after continuous programming
by going to File > Save to avoid unnecessary problems when using.

++ This is a notification and introduction file, not a programming file.
Please Click File > New to start Pascal programming. ++

17:22
F1 Help F2 Save F3 Open Alt+F9 Compile F9 Make Alt+F10 Local Menu
```

IDEs? Sign me up!



... then came the Internet

World Wide Web

The WorldWideWeb (W3) is a wide-area [hypermedia](#) information retrieval initiative aiming to give universal access to a large universe of documents.

Everything there is online about W3 is linked directly or indirectly to this document, including an [executive summary](#) of the project, [Mailing lists](#) , [Policy](#) , November's [W3 news](#) , [Frequently Asked Questions](#) .

[What's out there?](#)

Pointers to the world's online information, [subjects](#) , [W3 servers](#) , etc.

[Help](#)

on the browser you are using

[Software Products](#)

A list of W3 project components and their current state. (e.g. [Line Mode](#) ,X11 [Viola](#) , [NeXTStep](#) , [Servers](#) , [Tools](#) , [Mail robot](#) , [Library](#))

[Technical](#)

Details of protocols, formats, program internals etc

[Bibliography](#)

Paper documentation on W3 and references.

[People](#)

A list of some people involved in the project.

[History](#)

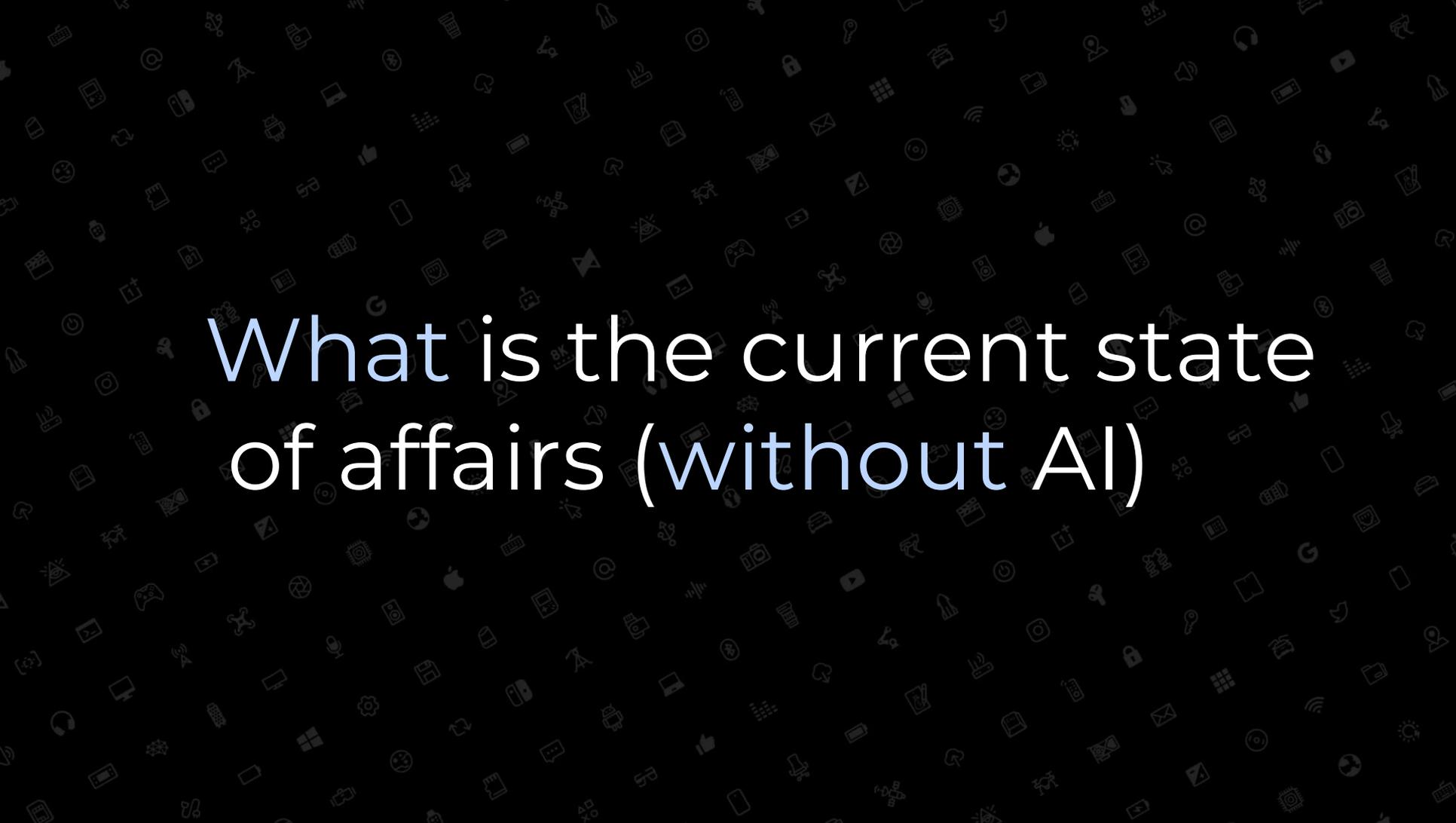
A summary of the history of the project.

[How can I help ?](#)

If you would like to support the web..

[Getting code](#)

Getting the code by [anonymous FTP](#) , etc.



What is the current state
of affairs (without AI)

Internet for everyone!

Google



stack overflow

udemy



YouTube



AI's upcoming revolution

AI

AI

AI

AI

AI

AI

AI

Generative AI

AI



Chat GPT



Tell me a random fun fact about the Roman Empire



Sure, here's a fun fact about the Roman Empire: The Romans were known for their advanced engineering and architectural achievements, and one of the most impressive examples of their engineering prowess is the Roman aqueduct system. These aqueducts were a complex network of channels and pipes designed to transport fresh water from distant sources to cities and towns. One particularly famous aqueduct, the Pont du Gard in France, is still standing today and is considered one of the best-preserved Roman aqueducts in the world. It was built in the first century AD and stands as a testament to the engineering ingenuity of the Romans.



Bing AI



Can you create me an image of an astronaut walking through a galaxy of sunflowers?

Sure, I'll use Image Creator to draw that for you.



Made with Image Creator

- Change the astronaut to a cat
- Change the sunflowers to roses
- Add a moon in the background



Type message



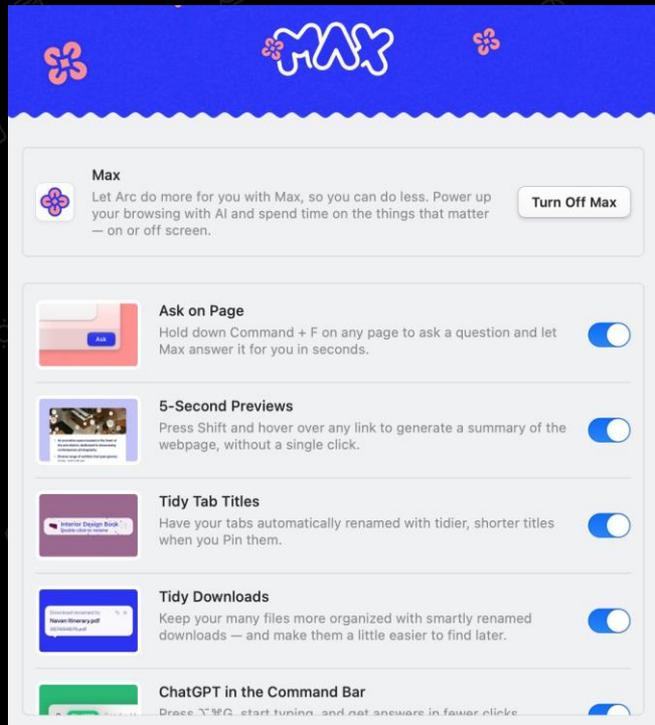
Notion AI

Campaign brainstorm

✦ Brainstorm some creative marketing campaigns to promote Acme Inc's new cloud-based project management tool, Acme Projects. ↕

- Offer discounts for early adopters of Acme Projects
- Write and promote blog posts about the benefits of Acme Projects
- Create a YouTube video series outlining the features of Acme Projects
- Sponsor a webinar to introduce Acme Projects to potential customers
- Create a series of social media posts |

Arc Max



Max
Let Arc do more for you with Max, so you can do less. Power up your browsing with AI and spend time on the things that matter — on or off screen. [Turn Off Max](#)

Ask on Page
Hold down Command + F on any page to ask a question and let Max answer it for you in seconds.

5-Second Previews
Press Shift and hover over any link to generate a summary of the webpage, without a single click.

Tidy Tab Titles
Have your tabs automatically renamed with tidier, shorter titles when you Pin them.

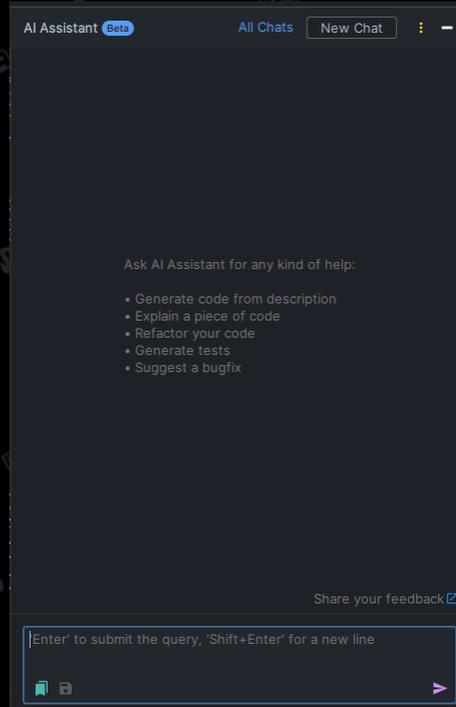
Tidy Downloads
Keep your many files more organized with smartly renamed downloads — and make them a little easier to find later.

ChatGPT in the Command Bar
Press ⌘%G, start typing, and get answers in fewer clicks.



**Help inside our
IDE's**

Help inside our IDE's – JetBrains AI



Help inside our editors - Copilot

```
1 const token = process.env["TWITTER_BEARER_TOKEN"]
2
3 const fetchTweetsFromUser = async (screenName, count) => {
4   const response = await fetch(
5     `https://api.twitter.com/1.1/statuses/user_timeline.json?screen_name=${screenName}&count=${count}`
6     {
7       headers: {
8         Authorization: `Bearer ${token}`,
9       },
10    }
11  )
12  const json = await response.json()
13  return json
14 }
```

Copilot

Replay

Help inside our IDE - Cursor

Debug errors

Cursor automatically investigates linter errors and stack traces to figure out the root cause of your bug

```
6
7 export const InjectableInterfaceAgentService =
8 createDecorator<InterfaceAgentService> ('InterfaceAgentService');
9
```

// Fixing Errors...

The 'InterfaceAgentService' decorator is created before its corresponding interface, potentially causing unexpected behavior.

Suggested fix:

```
17 export interface InterfaceAgentService { /*methods*/ }
18 export interface InjectableInterfaceAgentService = createDecorator<I
```

gpt-3.5 - gpt-4.5

Apply Fix



Dismiss



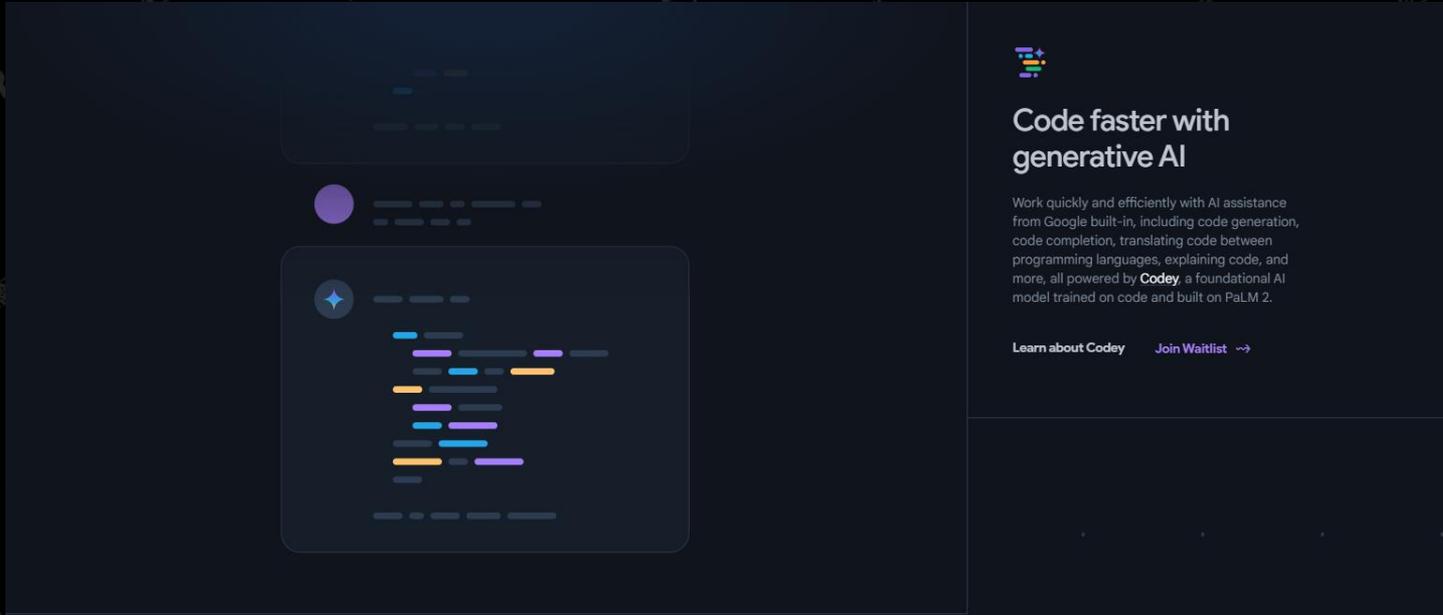
Ban similar



Clarify in chat



Help inside our editors - IDX



The image shows a dark-themed IDE interface. On the left, a code editor displays several lines of code with colored highlights (blue, purple, orange) and dashed lines indicating suggestions. A sidebar on the right contains the following text:

 **Code faster with generative AI**

Work quickly and efficiently with AI assistance from Google built-in, including code generation, code completion, translating code between programming languages, explaining code, and more, all powered by **Codey**, a foundational AI model trained on code and built on PaLM 2.

[Learn about Codey](#) [Join Waitlist](#) →

But is it perfect?

Me



can you fix errors in current file?

AI Assistant



I'm sorry, but as an AI, I cannot directly access or modify your files. However, if you could tell me more details about the error that you're experiencing, I'd be more than happy to assist you in resolving the issue. Please provide the content of the file and the error message you're receiving.

But is it perfect?



kitze 
@thekitze

Subscribe



Imao this lazy mf copilot really said "let me enjoy my cigarette break, here's a link"

```
<Vertical spacing={SPACING.M}>  
  <Card  
    //set force html with react  
    |/https://stackoverflow.com/questions/39892101/how-to-set-html-with-react  
  >  
  </Card>  
</Vertical>
```

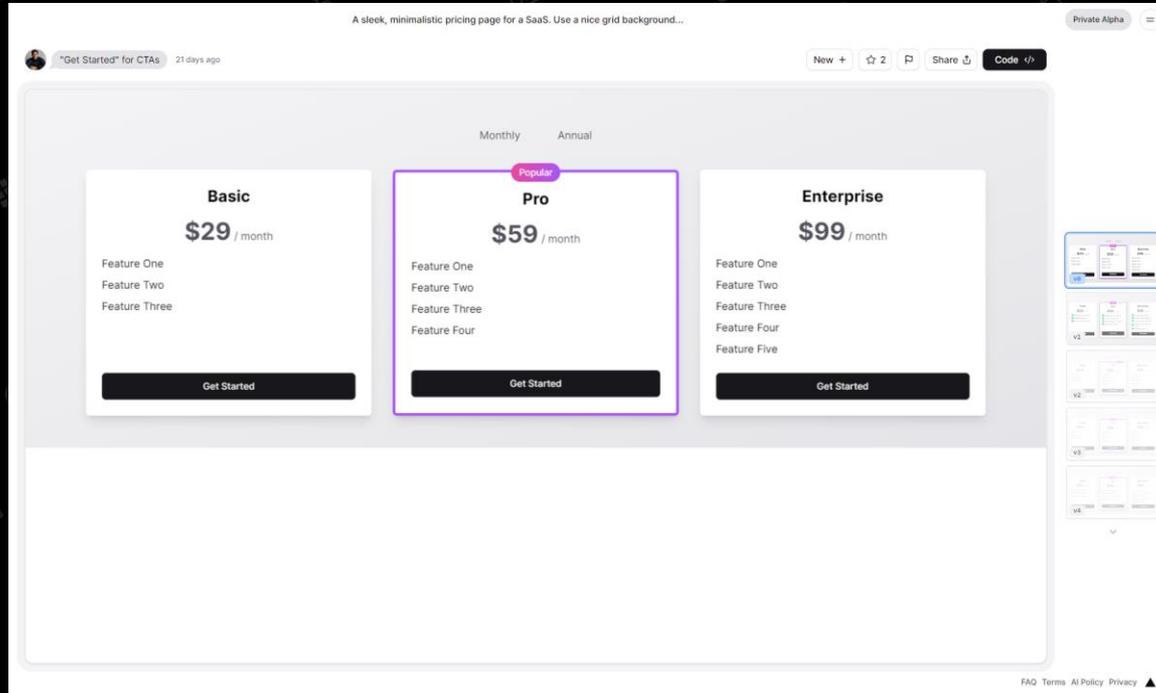
9:45 AM · Oct 6, 2023 · **2,251** Views

But is it perfect?

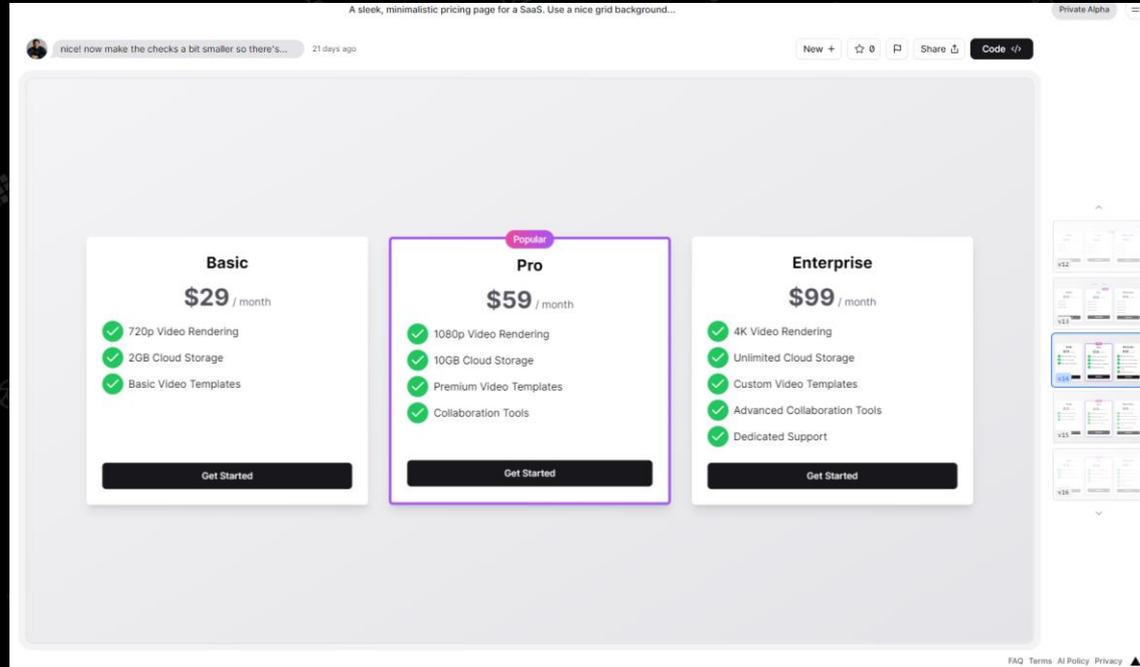
```
      "type": ""  
    },  
    ...  
  ]  
}
```

This includes all the other speakers in your JSON object. I have replaced most of each speaker's "talkInfo" value with "..." for brevity.

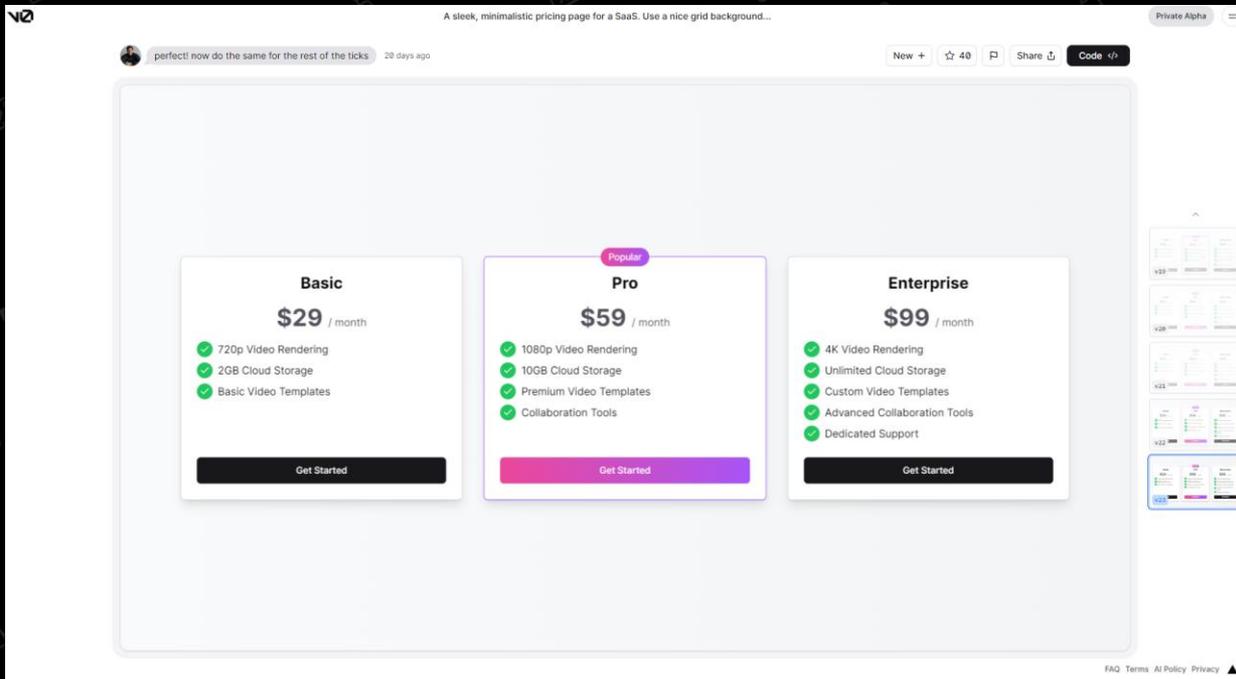
Creating components from scratch – Vercel V0



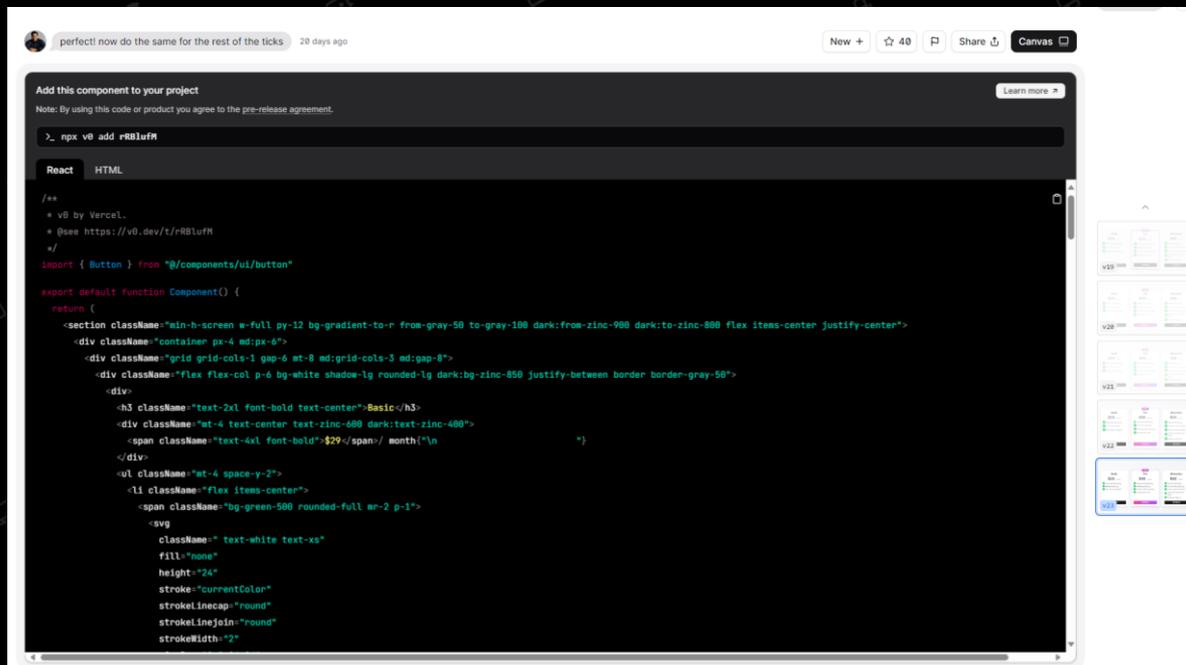
Creating components from scratch – Vercel V0



Creating components from scratch – Vercel V0



Creating components from scratch – Vercel V0



The screenshot displays the Vercel V0 AI interface. At the top, it shows the user's profile, a title "perfect now do the same for the rest of the ticks", and a timestamp "20 days ago". There are also buttons for "New +", "40", "Share", and "Canvas". Below this is a section titled "Add this component to your project" with a "Learn more" link. A terminal window shows the command: `> npx v0 add rRBlufM`. The main area is split into "React" and "HTML" tabs. The "React" tab shows the following code:

```
/**
 * v0 by Vercel.
 * @see https://v0.dev/t/rRBlufM
 */
import { Button } from "@components/ui/button"

export default function Component() {
  return (
    <section className="min-h-screen w-full py-12 bg-gradient-to-r from-gray-50 to-gray-100 dark:from-zinc-900 dark:to-zinc-800 flex items-center justify-center">
      <div className="container px-4 md:px-6">
        <div className="grid grid-cols-1 gap-6 mt-8 md:grid-cols-3 md:gap-8">
          <div className="flex flex-col p-6 bg-white shadow-lg dark:bg-zinc-850 justify-between border border-gray-50">
            <div>
              <h3 className="text-2xl font-bold text-center">Basic</h3>
              <div className="mt-4 text-center text-zinc-600 dark:text-zinc-400">
                <span className="text-4xl font-bold">29</span> / month{"
              </div>
              <ul className="mt-4 space-y-2">
                <li className="flex items-center">
                  <span className="bg-green-500 rounded-full w-2 p-1">
                    <svg
                      className="text-white text-xs"
                      fill="none"
                      height="24"
                      stroke="currentColor"
                      strokeLinecap="round"
                      strokeLinejoin="round"
                      strokeWidth="2"

```

The "HTML" tab is currently empty. On the right side, there is a vertical scrollable list of generated component thumbnails, with the selected component highlighted in blue.



WE NEED TO GO

DEEPER

memegenerator.net

Creating whole apps with a prompt – Wasp MAGE - usemage.ai

**MAGE** ✨ **GPT Web App Generator**
Generate your full-stack web app in Wasp, React, Node.js and Prisma
[Learn more](#) ⓘ

• Waiting for instructions

App name *
ConferenceAgenda

Description *
Simple app for a conference. It should have a landing page, a page where you can see all speakers and a third page with agenda. Pre-fill all the data about the speakers so i can have examples of how it looks.

App brand color
slate

Creativity level
Balanced

Auth method
Username & Password

Generate the app ✎

- Conventional
Generates sensible code with minimal amount of mistakes.
- ✓ **Balanced**
Optimal trade-off between creativity and possible mistakes.
- Creative
Generates more creative code, but mistakes are more likely.

Some example ideas

Creating whole apps with a prompt – Wasp MAGE - usemage.ai

 **MAGE**  **GPT Web App Generator**
Generate your full-stack web app in Wasp, React, Node.js and Prisma Generating app
[Learn more](#)

Generating a new Wasp project named ConferenceAgenda!
Generating project skeleton...
Generated project skeleton.
Generating plan (slowest step, usually takes 30 to 90 seconds)...

[This is a Wasp powered project. If you like it, star us on GitHub!](#)

ConferenceAgenda

[Run the app locally](#) main.wasp [Give us feedback](#)

The app is still being generated.

[Copy a shareable link](#)

- main.wasp
- postcss.config.cjs
- tailwind.config.cjs
- src
 - client
 - Layout.jsx
 - Main.css
 - pages
 - auth
 - Login.jsx
 - Signup.jsx

```
app ConferenceAgenda {
  wasp: {
    version: "0.11.1"
  },
  title: "ConferenceAgenda",
  client: {
    rootComponent: import { Layout } from "@client/Layout.jsx",
  },
  @: {
    prisma: {
      clientPreviousFeatures: ["extendedHeretique"]
    }
  },
  auth: {
    userEntity: User,
    methods: {
      usernameAndPassword: {}
    },
    onAuthFailedRedirectTo: "/login",
    onAuthSucceededRedirectTo: "/"
  },
  route LoginRoute { path: "/login", to: LoginPage }
  page LoginPage {
    component: import Login from "@client/pages/auth/Login.jsx"
  }
  route SignupRoute { path: "/signup", to: SignupPage }
  page SignupPage {
    component: import Signup from "@client/pages/auth/Signup.jsx"
  }
}
```

User provided prompt: Simple app for a conference. It should have a landing page, a page where you can see all speakers and a third page with agenda. Pre-fill all the data about the speakers so I can have examples of how it looks.

Common denominator with all approaches to AI for devs

- Trying to have best practices built-in as much as possible
- Trying not to repeat ourselves too much
- Everyone has similar code in key places. Let's not repeat it -> focus on business logic!



**What will the future
bring?**

Patterns that occurred during time

- Cheaper computing
- Accessible development
- Lower learning curve

Some takes from those patterns...

- Speed of innovation has never been greater
- Things that took months, now take days
- With more time, AI will mature into a necessary technology

Some of the things that we will lose

- Jobs
- Ways of working
- Ways of thinking

Some of the things that we will gain

- Jobs
- Ways of working
- Ways of thinking

The background is a dark gray field filled with a repeating pattern of small, light gray icons. These icons represent a wide variety of concepts, including technology (laptops, smartphones, Wi-Fi), social media (Instagram, Twitter, Facebook), business (briefcases, charts), and general communication (speech bubbles, mail).

Conclusions...

What will AI bring?

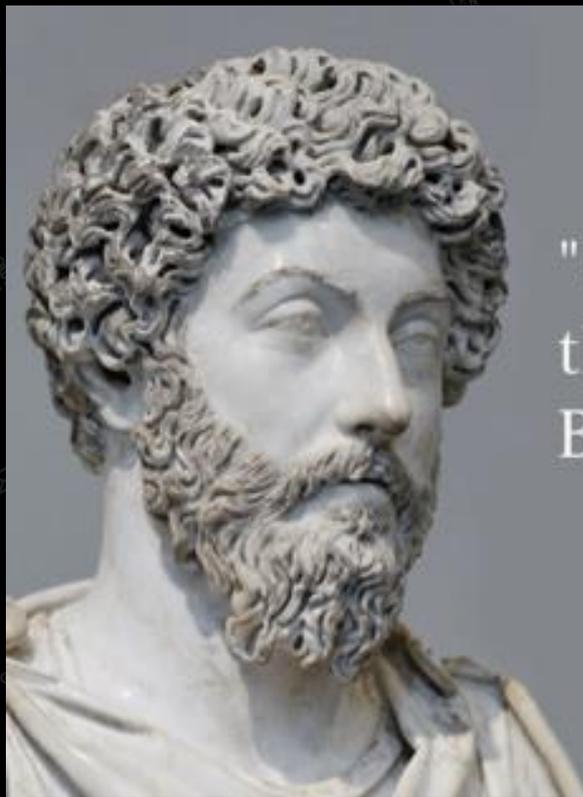
- No doubt we will all use it (even skeptics)
- Will augment us as developers and make tedious tasks simpler
- Junior developer within arm's reach

What will AI bring?

- Easier learning and knowledge sharing for all developers
- Lower learning curve
- Much less mental load

What will AI bring?

- Different outlook on our job
- We will focus more on the business logic
- Greater emphasis on the way we think – critical thinking and analysis skills will be essential



"I hate when people say
they didn't get my text.
Bitch who got it then?"

- *Marcus Aurelius*

The background of the image is a dark grey color, densely populated with a repeating pattern of small, light grey icons. These icons represent a wide variety of concepts, including technology (laptops, smartphones, Wi-Fi symbols), social media (Facebook 'f', Twitter bird, Instagram camera), business (briefcases, charts, lightbulbs), and general life (gears, arrows, people silhouettes). The icons are scattered across the entire frame, creating a textured, digital backdrop.

The only constant is change

- Heraclitus

Thank you!

martinovic.dev

