

# **Making design more human with GraphQL**

**#GraphQLConf**

**Hi!**

**I'm Bernardo**

**TravelRepublic**

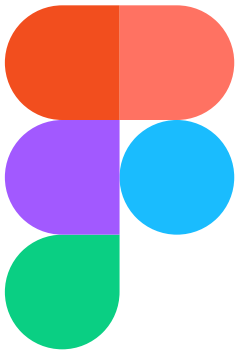
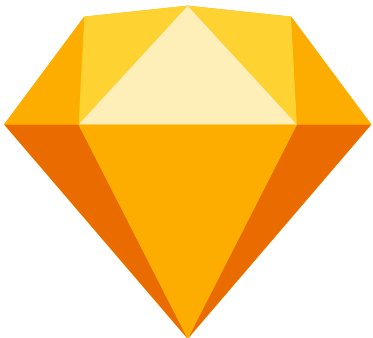
**@braposo**

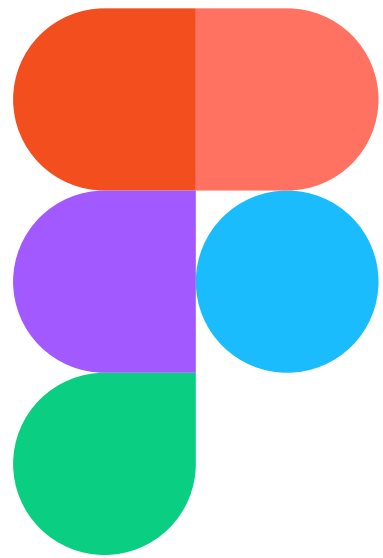
**Design**

**GraphQL**

# Evolution of design tools

# From dumb to smart





[figma.com/developers](https://figma.com/developers)

# Figma API

# Multiple endpoints

```
GET /v1/files/:key
GET /v1/images/:key

GET /v1/teams/:team_id/projects
GET /v1/projects/:project_id/files

GET /v1/files/:key/comments
POST /v1/files/:key/comments

GET /v1/teams/:team_id/components
GET /v1/teams/:team_id/styles
```

# Rigid tree structure

```
{  
  "id": "0:1",  
  "name": "Assets",  
  "type": "CANVAS",  
  "children": [  
    {  
      "id": "20:25",  
      "name": "Box",  
      "type": "COMPONENT",  
      "children": [  
        {  
          "id": "12:5",  
          ...  
        }  
      ]  
    }  
  ]  
}
```



**Let's see an example**

# Get all text styles in a specific frame

The image shows a design tool interface. On the left, a 'Pages' sidebar contains a list of categories: forms, controls, icons, styles (checked), # grids, # typography, content, h4, h3, h2, h1, and caption. A vertical axis on the right side of the sidebar ranges from -750 to 500. A zoomed-in view of the 'styles' category is shown, containing a green bar, a purple bar, a grey bar, and a black bar. To the right of the axis is a 'typography' panel with a grid of text styles: H1 desktop, H2 desktop, H1 tablet, H2 tablet, H1 mobile, H2 mobile, H3 desktop, H4 desktop, H3 tablet, H4 mobile, H3 mobile. Below the grid are three caption styles: CAPTION LARGE, CAPTION MEDIUM, and caption small. A red 'link' text is also visible. The main content area shows a paragraph of text: 'Constructivism is a new direction in the visual arts, architecture, photography and decorative and applied art, which originated in the early 1930s in the USSR. This current is one of the trends of the new avant-garde proletarian art. We can find confirmation of our direct involvement in the formation of this direction in the quotation of the Russian poet V.V. Mayakovsky.'

# Get all text styles in a specific frame

1. Fetch file data
2. Get the styles page
3. Get the typography frame
4. Extract font styles from each group

```
1  async function getFontStyles(figmaId, figmaApiKey) {
2    // 1 - Fetch File info
3    const result = await fetch("https://api.figma.com/v1/files/" + figmaId, {
4      method: "GET",
5      headers: {
6        "X-Figma-Token": figmaApiKey
7      }
8    });
9    const figmaTreeStructure = await result.json();
10
11   // 2 - Get styles page
12   const stylesPage = figmaTreeStructure.document.children.filter(item => {
13     return item.name === "styles";
14   })[0].children;
15
16   // 3 - Get font styles artboard
17   const fontStylesArtboard = stylesPage.filter(item => {
18     return item.name === "typography";
19   })[0].children;
20
21   // 4 - Go through each group to extract font styles
22   const fontStyles = fontStylesArtboard.map(fontGroup => {
23     return {
24       name: fontGroup.name,
25       styles:
26         fontGroup.children &&
27         fontGroup.children.reduce((groupStyles, subFontItem) => {
28           return {
29             ...groupStyles,
30             [subFontItem.name]: {
31               family: `${subFontItem.style.fontFamily}`,
32               size: `${subFontItem.style.fontSize}px`,
33               weight: subFontItem.style.fontWeight,
34               lineHeight: `${subFontItem.style.lineHeightPercent}%`,
35               spacing:
36                 subFontItem.style.letterSpacing !== 0
37                   ? `${subFontItem.style.letterSpacing}px`
38                   : "normal"
39             }
40           };
41         }, {})
42     };
43   });
44
45   return fontStyles;
46 }
```

# Get all text styles in a specific frame

```
[  
  {  
    "name": "caption",  
    "styles": {  
      "large": {  
        "family": "Arimo",  
        "size": "16px",  
        "weight": 400,  
        "lineheight": "140%",  
        "spacing": "3.2px"  
      },  
      ...  
    }  
  }  
  ...  
]
```

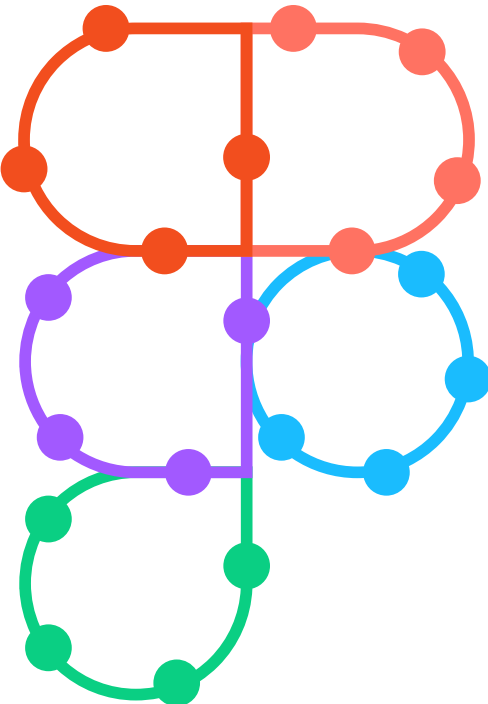
**What if we could use  
something simpler?**

# Get all text styles in a specific frame

```
file(id: "fileID") {  
  pages(name: "styles") {  
    frames(name: "typography") {  
      groups {  
        name  
        texts {  
          name  
          styles {  
            fontSize  
            fontFamily  
            fontWeight  
          }  
        }  
      }  
    }  
  }  
}
```

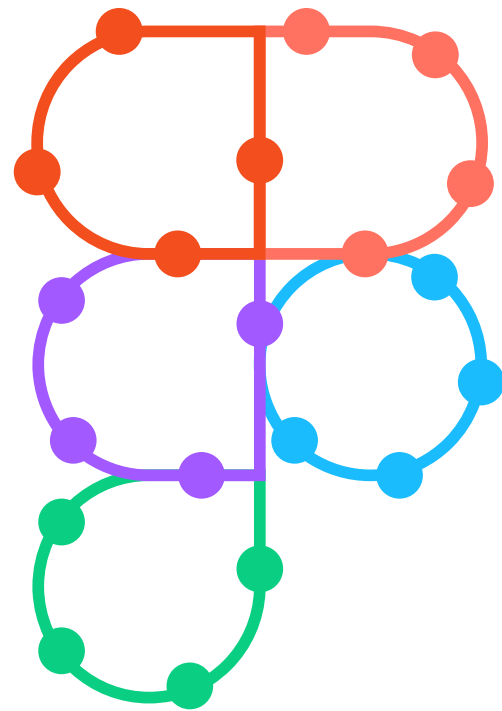
**It's just GraphQL™**





# figma-graphql

figma-graphql.party



[figma-graphql.party](https://figma-graphql.party)

**v2 available today**

**Rebuilt in TypeScript**

**Human-first API**

```
file(id: "PwzNmiknTie5VSEJ5HskMz") {
  pages(name: "styles") {
    frames(name: "typography") {
      groups {
        name
        texts {
          name
          style {
            fontSize
            fontFamily
            letterSpacing
            fontWeight
          }
        }
      }
    }
  }
}
```



```
"groups": [
  {
    "name": "caption",
    "texts": [
      {
        "name": "large",
        "style": {
          "fontSize": 16,
          "fontFamily": "Arimo",
          "letterSpacing": 3.2,
          "fontWeight": 400
        }
      },
      {
        "name": "medium",
        "style": {
          "fontSize": 12,
          "fontFamily": "Arimo",
          "letterSpacing": 2.4000000000000000,
          "fontWeight": 400
        }
      }
    ]
  },
  {
    "name": "caption",
    "texts": [
      {
        "name": "large",
        "style": {
          "fontSize": 16,
          "fontFamily": "Arimo",
          "letterSpacing": 3.2,
          "fontWeight": 400
        }
      },
      {
        "name": "medium",
        "style": {
          "fontSize": 12,
          "fontFamily": "Arimo",
          "letterSpacing": 2.4000000000000000,
          "fontWeight": 400
        }
      }
    ]
  }
]
```

**Designer**

**Developer**

**Manager**

**Designer**

**Get the background  
colours of all the global  
styles to update their  
Design System  
documentation**

# Designer

```
{
  file(id: "fileID") {
    styles(type:FILL) {
      name
      styles {
        color {
          r
          g
          b
        }
      }
    }
  }
}
```

**Developer**

**Export all icons in a  
design document to  
generate up-to-date  
React components**

# Developer

```
{
  file(id: "fileID") {
    pages(name: "Icons") {
      components {
        name
        size {
          width
          height
        }
        export(format: svg)
      }
    }
  }
}
```



**Manager**

**Get the screenshots of the prototype screens for a few different features to present at a product meeting**

# Manager

```
{
  projects(teamId: "teamID") {
    featureA: files(name: "Feature A") {
      pages(name: "Prototype") {
        frames {
          name
          export(format: jpg)
        }
      }
    }
    ...
  }
}
```

**GraphQL makes  
design more human**

**GraphQL makes**  
**technology more human**

**Complex systems become  
accessible to everyone**

# Human-first API



**Jon Gold**

@jongold

Follow

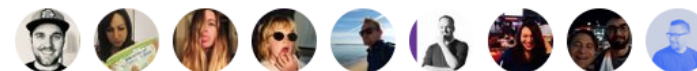


I got so hung up on intellectually & technically solving problems for a few years that I forgot human experience is the most important thing.

super, complex & ambitious JS is nice, but sitting at your laptop with a smile on your face and living life without stress is much nicer

5:54 pm - 19 Mar 2019 From Boulder Creek, CA

2 Retweets 117 Likes



**How can we make our  
systems more human?**



## Special thanks:

**Sara**  
@NikkitaFTW

**Andrey**  
@okonetchnikov

**Jon**  
@jongold

# Thank you!

@braposo