# Ilyá Belsky

## **Technical Skills**

Likes: d3.js javascript typescript zsh vim sketchapp observablehq

Dislikes: php mysql java

## **Experience**

Jan 2021 → Current Product Manger/Product Owner/Analytic – iSmartRussia d3.js, r, observablehq

Translating business needs into features. Maintaining the integrity of the product, protecting it from feature creep. Analysing how users use the product. Mining insights from the data. Guiding UI design process. Describing features in the language that developers can understand.

 $Aug\ 2020 o Jan\ 2021\$ Lead Front-end Developer – iSmartRussia reactjs, typescript, d3.js

Thinking through complex features and split them into small doable tasks for the developers. Designing the architecture and implementing critical parts of the application.

Sep 2018  $\rightarrow$  Jul 2020 **DataViz Developer** – <u>DCI</u> d3.js, vue.js, r, typescript

Building interactive story-telling data-driven Vue components with d3.js under the hood

 $Jan\ 2018 o Jul\ 2020\ iOS\ developer\ and\ UI/UX\ designer\ -$  Plant app startup sketchapp, swift, xcode, c, esp32, esp-idf

I'm responsible for the mobile app: UX/UI design, development for iOS.

- Auth with Firebase
- REST communication with the backend
- Communication with an IoT device (ESP32)
- Programming of the ESP32 device (C language)

 $Aug~2018 \rightarrow Feb~2020$  Front-end Developer – iSmartRussia reactjs, d3.js

Build visual interactive React components. (Vector editor, animations, Number Line and more)

 $May\ 2015 o Jul\ 2018\$  Front-end Developer and Full-stack Designer -  $\underline{MethodExists}$  reactjs, d3.js, ecmascript-6, javascript, leaflet, redux, sketchapp, react-native

We are developing rich data management/mining/visualization application for large international businesses. I'm responsible for the frontend: architecture, design, UX, data visualizations, reusable npm modules. Quality control: code/design/ux reviews, writing style guides and best practices. UI/UX Design: understand the user needs, make wire-frames, UX prototypes, hi-fidelity designs, iterate.

Implemented dashboard with interactive widgets with stats for emoji startup.



Jan 2013 → May 2015 Front-end Developer (Data Visualization) – MODUL javascript, d3.js, backbone.js, requirejs, sass, google-apps-script, heroku

## "Visualization of the production processes on the factory"

A factory didn't have tools to control the production processes. Business processes were kept only in the minds of the top managers. They had some analytical data collected but they did't have tools to analyze this data. Therefore my task was to make a clear visualization of the key processes that are taking place in different parts of this big organization.

## What I did:

- Developed visualizations representing the current state of the processes of the production [d3.js];
- The visualization evoke insights among the management of the plant and had finally lead the board to consider if the head of the production department was the right person for this job.

## What I learned:

- Data visualization is an extremely underestimated task among other tasks for solving business problems;
- The author of the d3.js library is really smart guy. I've learned a lot just reading his source code.

 $2008 \rightarrow Feb~2015$  Senior developer, Systems Analyst/Architect – SOYUZ c#, .net, mssql, uml-modeling, design-patterns

## "Exchange hub" project

The task was to create data exchange service for both corporate and external use. The corporate exchange hub is destined for the interaction between different software components used in our company. The wider purpose was to use the Exchange hub as a B2B exchange data provider for other businesses.

## What I did:

- Designed the exchange hub architecture with plugin system providing data exchange in different formats and by different transport protocols by simple adding a corresponding data- or transport-plugin;
- Developed from scratch the main program and basic plugins (http-transport, ftp-transport, file-transport plugins) [C# .NET Framework 3.5];

## What I learned:

• A well-designed architecture makes you happy on the developing stage;

## Other minor projects

Developed "parrot" module to allow monitoring uptime and error status of our 24/7 software [C# .NET Framework 3.5]

2007 → Jan 2015 **Web-developer** – SOYUZ xml, xslt, javascript, css, jquery, mssql, html5

### "Corporate claim system" project

It was a user-friendly claim management system and project management with web-interface. The task was to create a system that would allow every department of our company fill an issue to another department for quick and easy processing.

#### What I did:

- Designed and developed the claim system with web-interface. This site is using the existing site-engine that I had
  developed before, with my improvements (refactored, cleaned out and optimized the code);
- Developed rich ajax client-side functionality [jquery];
- Using popular jquery plugins: jstree, datatables, progressbar;
- I continue to develop and adjust the system considering the new trends in web-developing [html5].

#### What I learned:

- · Ajax is good!
- The use of DVCS (distributed version control system like git or mercurial) is good even if I am the only developer in the project.

Sep 2012 → Jun 2013 **Web-developer** – JSC "MOESK" php, mysql, javascript, css, jquery

## Online office system

One of the largest distribution electric grid companies of Russia had a lack of user support services. Clients were unable to present a claim or get an appointment without having to stay in the line for hours.

#### What I did:

- User accounting system with fully-featured admin area;
- Online appointment system that allows users to set the desired time frame for a visit on the schedule exposed
  on the client's official website:
- Online claim management system that allows users to post claims without visiting the office. And check the claim status online.

## What I learned:

- Major companies have a big lack of IT specialists and live in the 90s;
- Never apply for a work with big rich companies that still have a php4 backend;
- With minimum changes in the backend it is still possible to make a fully-featured and interactive application relying only on the front-end;

Jun 2011 → Jan 2012 **Web-developer** python, django, jquery, google-maps, gmap3

# "Favorite Places" project

After many years of working for a big corporation I decided to undertake a freelance project at my free time. The task is to develop yet another geoservice with local search in the map and places index.

This project is an ideal sandbox for me as a developer, due to the fact that my client is very well-disposed to me, and I can fully control the technical scope of works to be done.

After some hesitation between RoR and Django, I have chosen the latter. Now I have a great time pythoning and wonder how could I use PHP before.

In this project I like the fact that this project will be seen and used and judged by the real people and not only by the corporate employees as it is usually done on my principal job. This is quite a challenge because this means a higher grade of responsibility for me as a programmer.

The project is not finished yet due to low concernment of the client.

## What I do:

I'm developing from scratch yet another geoservice with local search in the map and places index [django, jquery, google-maps].

## What I learned:

- python is now my favorite programming language;
- django the lack of documentation is offset by friendly and active community;
- · postgresql is better for GIS than mysql.

2005 → 2008 **Web-developer** – SOYUZ php, sybase, xml, xslt, javascript, css, prototype

#### "www.soyuz.ru" project

From 2005 up to 2008 I was working on the project www.soyuz.ru which implied the creation of commercial and representative site of a major Russian recording company.

#### What I did:

- Designed and developed from scratch the site engine for www.soyuz.ru which is using till now (10 years)
   [php+xml+xslt];
- Developed a lot of php-plugins for the site engine (e.g. web-mail-sender, grammar utility for Russian inclination forms and other minor functions);
- $\bullet \quad \text{Developed the client-side functionality for the site } [\texttt{prototype} \quad \& \quad \texttt{raw} \quad \texttt{javascript}].$

## What I learned:

- php+xml+xslt combining is a poor solution (xml-xslt transformations are too slow, xslt templates are too unfriendly for designers).
- Better not to reinvent the wheel and use the existing frameworks (like django or RoR) for developing trivial sites.

#### **Education**

 $2000 \rightarrow 2005$  Software of computers and automated systems (specialist) – Saratov State Techical University compilers, linux, c, c++, opengl, php, mysql, visual-studio, uml-modeling

implemented a game "VoleyBomb" on pure c++ which was using sprites and direct access to video-memory,
used my own graph library to render game menu and gameplay; my own particle engine to render sparks from
the bomb.

# **Projects & Interests**

Jun 2011 → Current Stack Overflow – <a href="https://stackoverflow.com/users/823778/oluckyman">https://stackoverflow.com/users/823778/oluckyman</a>

Written 21 answers. Active in d3.js.

Jan 2013 → Current acompleter – <a href="https://github.com/oluckyman/acompleter">https://github.com/oluckyman/acompleter</a> javascript, jquery

Animated jQuery Autocomplete plugin

There are lot of autocompletion plugins. One I have created myself years ago, before jQuery era. After a while I needed nice animated autocompletion plugin for jQuery. But after a lot of searching I found nothing that I would like. So I forked the simplest jQuery autocomple plugin and basing on it developed a nice sexy autocompleter myself.

Sep 2012 — Current **fibonacci-plant** — <a href="https://github.com/oluckyman/fibonacci-plant">https://github.com/oluckyman/fibonacci-plant</a> processing

The plant leaves grow and make the gold angle to each other

First of all I have started learning Processing by this project.

It is the best way to learn the technology: to start using it.

So I had an idea of this model and got on to work.

My intention was to reveal how the Fibonacci phyllotaxis emerges naturally during the simulation of the growth of a plant. And I have accomplished what I wanted. As a result this model demonstrates how the angle between the successive leaves gets close to the Golden Angle.

## **Apps & Software**

May 2020 Yoga Calendar Effect • DataViz – <a href="https://yoga-calendar-effect.now.sh/">https://yoga-calendar-effect.now.sh/</a> d3.js, observablehq, gatsby, vercel, reactjs

The chart shows that in any moment there is someone who's watching the same yoga video with you. The data was collected for my Telegram bot.

# Readings

**Dive Into Python** – Mark Pilgrim – http://www.amazon.com/Dive-Into-Python-Mark-Pilgrim/dp/1441413022%3FSubscriptionld%3DAKIAIIBINOD46VC3JCLQ%26tag%3Dstackoverfl08-20%26linkCode%3Dxm2%26camp%3D2025%26creative%3D165953%26creativeASIN%3D1441413022

**Vi iMproved (VIM)** – Steve Oualline – http://www.amazon.com/Vi-iMproved-VIM-Steve-Oualline/dp/0735710015%3FSubscriptionId%3DAKIAIIBINOD46VC3JCLQ%26tag%3Dstackoverfl08-20%26linkCode%3Dxm2%26camp%3D2025%26creative%3D165953%26creativeASIN%3D0735710015

Design Patterns: Elements of Reusable Object-Oriented Software – Erich Gamma, Richard Helm, Ralph Johnson, John Vlissides – http://www.amazon.com/Design-Patterns-Elements-Reusable-Object-Oriented/dp/0201633612%3FSubscriptionld%3DAKIAIIBINOD46VC3JCLQ%26tag%3Dstackoverfl08-20%26linkCode%3Dxm2%26camp%3D2025%26creative%3D165953%26creativeASIN%3D0201633612

Code Complete: A Practical Handbook of Software Construction – Steve McConnell – http://www.amazon.com/Code-Complete-Practical-Handbook-

Construction/dp/0735619670%3FS ubscription Id %3DAKIAIIBINOD46VC3JCLQ%26tag%3Ds tackover fl08-20%26 link Code%3Dxm2%26 camp%3D2025%26 creative%3D165953%26 creative ASIN%3D0735619670

Secrets of the JavaScript Ninja – John Resig, Bear Bibeault – http://www.amazon.com/Secrets-JavaScript-Ninja-John-Resig/dp/193398869X%3FSubscriptionId%3DAKIAIIBINOD46VC3JCLQ%26tag%3Dstackoverfl08-20%26linkCode%3Dxm2%26camp%3D2025%26creative%3D165953%26creativeASIN%3D193398869X

**Pro JavaScript Techniques** – John Resig – http://www.amazon.com/Pro-JavaScript-Techniques-John-Resig/dp/1590597273%3FSubscriptionId%3DAKIAIIBINOD46VC3JCLQ%26tag%3Dstackoverfl08-20%26linkCode%3Dxm2%26camp%3D2025%26creative%3D165953%26creativeASIN%3D1590597273

**Pro Git** – Scott Chacon – http://www.amazon.com/Pro-Git-Scott-Chacon/dp/1430218339%3FSubscriptionId%3DAKIAIIBINOD46VC3JCLQ%26tag%3Dstackoverfl08-20%26linkCode%3Dxm2%26camp%3D2025%26creative%3D165953%26creativeASIN%3D1430218339

Visualizing Algorithms – http://bost.ocks.org/mike/algorithms

Incredible work by Mike Bostock with a lot of good stuff in the "Related work" section.

The Visual Display of Quantitative Information - Edward Tufte - https://www.edwardtufte.com/tufte/books\_vdqi

Not so practical but it was a pleasure to hold in hands a well-crafted piece of design. I'm glad I got a dead-tree version of the book.

Deep Work - Cal Newport - http://calnewport.com/books/deep-work/

I failed to convince my coworkers why multi-tasking, instant communication and quick switching between projects results to low-quality output. In that book, the author explains exhaustively these matters and provide lots of examples and research studies.

Zen and the Art of Motorcycle Maintenance - Robert M. Pirsig

Must read and reread for anyone dealing with technology

Lila: An Inquiry into Morals - Robert M. Pirsig

Essays - Bret Victor - http://worrydream.com/

Must read: The Ladder of Abstraction, Learnable Programming. And all his talks. It is a gem.

Rework – Jason Fried, David Heinemeier Hansson – https://basecamp.com/books/rework

No-bullshit approach to building software business

Clean Code - Robert C. Martin

There is no software without architecture. But plenty with bad architecture. The sooner you learn essentials the better as it will affect every you decision in a lifetime.

The Mythical Man-Mont – Fred Brooks

A 50 years old classics that becomes better with years. Time-related details are easier to notice and skip to not be distracted and it's easier to focus on the essence. The book uncovers the metaphysical depths of software. And suggests universal approaches to managing its complexity.

**REMOTE: Office Not Required** – Jason Fried, David Heinemeier Hansson – https://basecamp.com/books/remote

Some parts could be outdated depending on what stage of transition to Remote work you are. Well written easy read.

First Computer: ZX Spectrum
Favorite Editor: Vim

**Tools**