Ivan Babkov

3D Javascript Developer | Senior Software Engineer

10 years of relevant experience

Portfolio: ibabkov.com

Github: github.com/ibabkov

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MAIN SKILLS

Typescript • Javascript • Node.js • WebGL • GLSL • Three.js • Unity • Babylon.js • Pixi.js • 8thWall • Leaflet • D3.js • Vue • React • React Three Fiber • React Native • Docker • Blender • Spline • Figma • HTML • CSS

OTHER SKILLS

Express • Next.js • Nest.js • MobX • Redux • A-Frame • Mapbox GL • Deck.gl • Zapworks • MongoDB • GraphQL • Webpack • Babel • ESbuild • Jest • Enzyme • RTL • Three Test Renderer • Cypress • Selenium • AWS • Git

WORK EXPERIENCE

Senior Software Developer, Mappedin (mappedin.com/demos) *– Jan 2023 - Present, Waterloo, Canada*

Mappedin is the leading platform for indoor spatial data management and mapping experiences. Mappedin works with businesses in over 57 countries, and more than 1,700 venues use Mappedin to power their indoor mapping experiences. At Mappedin, I play a crucial role in the SDK development team. My main contributions and achievements include:

- Tech stack: Typescript, WebGL, GLSL, Three.js, ESBuild, Swift, and Kotlin.
- Developed sophisticated 2D/3D SDK features for the web and mobile SDKs using WebGL, GLTF, and Three.js.
- Refactored the entire Web SDK to migrate to an Entity-Component-System (ECS) architecture, improving scalability and time-to-market (TTM) for new features.
- Enhanced SDK visuals with various effects, like ambient occlusion, custom anti-aliasing, etc.
- Onboarded and mentored co-op students in the role of 3D Software Developer.
- Introduced a brand-new 3D rendering pipeline, incorporating multi-buffer rendering to optimize performance.
- Created an auto-adjustment tool to keep 30+ FPS on low-end devices based on the current performance.
- Implemented product analytics to provide insights into feature utilization and customer challenges.
- Expanded and facilitated the integration of the SDK through cross-team collaboration.

Senior Web Developer, Cian (cian.ru) – *May 2018 - July 2022, Remote*

Cian was the most famous Russian online real estate database website (http://bit.ly/3cVijks) and one of the world's ten most popular real estate websites (http://bit.ly/2IEYkZo) in 2022. I have made the following accomplishments and contributions:

- Tech stack: Node.js, Express, React, Redux, Typescript, WebGL, and CSS.
- Supervised two front-end teams and owned their front-end architecture.
- Integrated apartment buildings' interactive 360 panoramas (WebGL, Krpano).
- Authored a reusable React components library, including features like component generation from the Figma API, auto-generated documentation, performance monitoring, and a cross-team communication process.
- Led the redesign of condo microservices, resulting in a 13% rise in target calls and 40% better TTI.
- Completed over 30 projects and shifted from a monolithic (Python, Django) to a microservices architecture(Node).
- Organized a unit testing process (with 100% coverage) as part of a working group.
- Performed hundreds of coding and tech interviews and mentored a dozen front-end engineers.
- Performed code reviews and maintained more than 17 git repositories.
- Composed a grading system and skills map for the company's front-end developers.

Software Engineer, IRZ – *Aug 2017 - May 2018*

IRZ was a small aerospace company focused on aerospace software for the International Space Station, ground-based radio stations, and ground control missions. Key areas where I have contributed and achieved success are:

- Tech stack: Typescript, WebGL, GLSL, Three.js, React, CSS, and Webpack.
- Spearheaded the front-end development initiatives in the company.
- Engineered a 3D visualization of Earth's low orbit using WebGL, GLSL, and Three.js, enhancing the interactive experience for space mission simulations and monitoring.
- Designed and developed robust user interfaces integrated within Qt WebView.
- Switched the team from waterfall practices to using the Agile methodology and its Kanban framework version.
- Persuaded the CTO to establish a UI components library, designed it in Sketch, and implemented it using React.js with all the necessary APIs.
- Reduced average CPU usage in the application (with a high re-rendering rate) from ~95% to ~10%.

OTHER WORK EXPERIENCE

Web Developer, Tinkoff (tinkoff.ru) – *Aug 2015 – Jul 2017*

Javascript Developer, Ru-Center Group – *Feb 2014 - Dec 2014*

EDUCATION

2014 Master's degree in business management, Moscow State University of Railway Engineering
WES certified, ECA# 3922093IMM, Mar 2019.