Stephen M. Smith
AdTech Engineer • Software Engineer • UI/UX Developer

Nashville, TN
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Summary

- 10+ Years' Experience in Front End Development and JavaScript
- 6+ Years' Experience with ReactJS and Webpack
- 6+ Years' Experience Ad Technology and Development (Publisher Side)
- 5+ Years' Experience Node.js (Server Side)
- 4+ Years' Experience in Big Data
- B.S. Degree in Computer Science
- B.S.B.A Degree in Management of Information Systems

Professional Experience

Spiny.ai • Remote • March 2022 – Present
Software Engineering Lead

As the Software Engineering Lead on the Spiny.ai team I oversee 5 engineers and their projects along with leading development on integrations and our analytics application.

- Design and maintain a tiered, multi-layered mono-library encompassing analytics, ads, and A/B testing, structured into components, modules, and submodules.
  - Efficiently integrate and maintain various third-party integrations, including Snowplow, JW Player, Connatix, Taboola, Amazon, and GeoEdge.
  - Design and implement dynamic ad insertion, enabling precise control over location, exclusion scenarios, and frequency.
  - Optimize header bidding and bid caching processes, boosting revenue by up to 35% for customers.
  - Enhance ad refresh capabilities, resulting in a 30% increase in impressions per session for customers.
- Actively engage in comprehensive research and analysis of technology and dependency options, contributing to strategic decision-making for the organization's technological direction.
- Develop and maintain a multitenant configuration system, streamlined for flexible variant configurations in A/B Testing and edge case scenarios.
  - Refine and manage tiered configurations for global application with override capabilities at organization, domain, and variant levels.
- Design and build various utilities to improve library functionality for end users and align features with business goals.
  - Develop logic and action engine driven by configurations to better adapt to diverse end user scenarios.
  - Create a themed logging utility with throttled reporting and named sub-logger features, maintaining source code location integrity except when reporting is essential.
  - Implement an object mapper for transforming client-side data into strict data schemas, enhancing reporting and optimization.
  - Design an A/B Test permutation generator to efficiently conduct numerous tests with straightforward configurations.
- Led the transition from a legacy PHP API to a modern Nest.js ecosystem, enhancing the core analytics application's performance and scalability.
- Design and plan a policy-based access control (PBAC) system for row and column-specific data, adhering to the CASL methodology.
- Serve as the primary contact for customer site onboarding and analysis, determining requirements for successful integration with our product.
- **Technology Used:** TypeScript, Webpack, Lodash, Prebid.js, Visual Studio Code, Git, GitHub, GitHub Actions, Snowflake, Snowplow, Snowcat Cloud, Nest.js, Next.js, React, PostgresDB, CloudFlare, CASL/PBAC

Spine Media LLC • Remote • October 2021 – March 2022 (6 months)
Senior Software Engineer

As a Senior Engineer at Spine Media, I mentored and trained the development team in advertising technologies, revamped their ads wrapper, and enhanced their server-side platform capabilities.

- Construct a modular, configuration-based client-side ads wrapper.
  - Integrated an application API to dynamically import configurations into the client-side library, enhancing system adaptability.
  - Implement integration with header bidding libraries including Prebid and Amazon.
  - Develop a queue and request manager system to oversee the auction process and ad refresh cycles.
  - Implement lazy loading at both the individual ad unit and auction levels to optimize ad delivery.
- Mentored engineers on client side ads processes, optimizations, and best practices.
- **Technology Used:** JavaScript, Webpack, Lodash, Prebid.js, Visual Studio Code, Git, GitLab, Asana

ViacomCBS • Remote • May 2019 – October 2021 (2 years, 5 months)
Senior Software Engineer (Ad Technology)

Leveraging my experience from Comicbook and PopCulture, I assumed a lead engineering role on the Central Ad Operations Technology team at CBS Interactive/ViacomCBS. My key responsibility was the development and maintenance of a new client-side ad wrapper, incorporating similar ad optimizations from my previous role.

- Developed a configuration-driven modular client-side ad wrapper.
  - Integrated with Prebid, Amazon, and IndexExchange header bidding libraries.
  - Integrated Prebid Video and Amazon Video in a consolidated manner for video library consumption.
  - Created queue and request manager-based system for auction and ad refresh lifecycle management.
  - Added lazy loading capability at the unit and auction level to ensure optimal serving of ads.
  - Developed event system for library consumers to hook into and react to ad-based events.
  - Created post render ad identification system for identifying ad types, sizes, and sources.
  - Created analytics module that allows consumption of Prebid and Amazon bid data as well as performance timings for page and ad events. These analytics events could be reported to multiple API endpoints with configurable frequency and fail logic.
  - Maintained integrations with third party libraries/systems such as MOAT Yield Intelligence, Confiant, and IAS.
  - Maintained integrations with internal libraries/systems such as Compliance, Machine Learning Annotations, and Ad Frequency Management.
- Created and maintained a build system with over 700 bundle outputs based on website, geolocation, compression algorithm, modern/legacy browser, and minification.
- Created dynamic CDN routing configurations to allow for serving JavaScript bundles based on geolocation, modern/legacy browser, and compatible compression algorithm.
- Created continuous integration and deployment system using GitHub Actions, Amazon S3, and Fastly.
- Constructed ad wrapper supporting API.
  - Serves endpoints for configurations and pushing client-side errors to Google Error Reporting.
  - Receives 250-1500 requests per second.
  - Continuous integration and deployment handled via GitHub Actions.
- Collaborated with many stakeholders across multiple teams to ensure requirements meet business objectives.
- **Technology Used:** JavaScript, Node.js, Express, Webpack, Lodash, Prebid.js, Visual Studio Code, Git, GitHub Actions, Google App Engine, Google Error Reporting, Redis, VCL, Fastly

CBS Interactive • Brentwood, TN • August 2016 – May 2019 (2 years, 9 months)
Front End Developer (popculture.com & comicbook.com)

As a Front End Developer at CBS Interactive, I specialized in Front End Architecture, focusing on JavaScript development. My primary responsibilities encompass enhancing user experience, optimizing advertising monetization, and improving performance.

- Implemented and maintained Gulp processes for minification, polyfill, autoprefixing, and concatenation with nested bundling, achieving:
  - A 92% reduction in JavaScript files referenced per page (from 24 to 2).
  - An 83% reduction in CSS files referenced per page (from 12 to 2).
  - Approximately a 60% reduction in JavaScript file size per page (from ~753kb to ~298kb).
- Automated performance reporting using gtmetrix (YSlow & PageSpeed), with capabilities to post results on multiple analytics platforms.
- Automated linting and documentation generation.
- Created and maintained a commenting system using ReactJS, ES6, and Lodash.
- Developed an image uploader interface with ReactJS, ES6, HTML Canvas, and Semantic UI, allowing users to adjust image quality for optimal performance and experience.
- Implemented and maintained processes for our ad stack and ads wrapper, including integration with Prebid.js and DoubleClick for Publishers.
- Designed a configuration generator for bidder toggling without losing identity parameters.
- Configured event-based auctions with conditionals, dynamic ad injection, lazy loading, and bid caching, resulting in a 30% increase in effective ad CPM.
- Collaborated closely with the Ad Operations manager to maximize ad inventory monetization.
- Researched and monitored analytics to ensure code releases align with business objectives.
- Designed and implemented user interface components with ReactJS, SemanticUI, and Lodash, enabling editorial teams to organize, edit, and slot article layouts on our website.
- Developed a live polling interface, boosting social media engagement by 200% to 3700%.
- Created a floating Twitch.TV livestream miniplayer integration.
- Developed a video media wrapper for seamless transitions between videos on a page.
- **Technology Used:** JavaScript, PHP, HTML, CSS, Gulp, Node.js, ReactJS, SemanticUI, Webpack, jQuery, Lodash, Prebid.js, Visual Studio Code, Git, Assembla, Phalcon, BrowserStack, DoubleClick for Publishers, and Adobe Creative Cloud.

Trakref, LLC • Nashville, TN • October 2014 – July 2016 (1 year, 10 months)
Front End Developer (www.trakref.com)

As a Front End Developer for Trakref, my responsibilities evolved from brand transition and styling to overall user experience improvements. I was directly responsible for their marketing site and application UX.

- **Technology Used:** Jade, Sass, JavaScript, C#, PHP, Gulp, ReactJS, AngularJS, jQuery, Bootstrap, MaterializeCSS, WordPress Administration, Visual Studio, Sublime Text, Remote Desktop, Git, Teamcity, ASP.NET MVC 5, Webforms, SQL Server, IIS 7, and Adobe Creative Cloud.

Savant Learning Systems • Martin, TN • January 2013 – August 2014 (1 year, 7 months)
Technical Support / Application Designer (www.savantlearningsystems.com)

At Savant Learning Systems I transitioned from the role of Technical Support to Application Designer where my primary responsibility was improving user interfaces for an online learning management system.

- **Technology Used:** HTML, CSS, JavaScript, jQuery, C#, DotNetNuke, Remote Desktop, FileZilla, Bootstrap, Sublime Text, Visual Studio, ZenDesk, and Adobe Creative Suite.

Education

The University of Tennessee at Martin, Martin, TN: 2014
Bachelor of Science – Computer Science
The University of Tennessee at Martin, Martin, TN: 2013
Bachelor of Science in Business Administration – Management Information Systems

Technical Skills

Development Languages	JavaScript (+ES6), Sass, Stylus, Jade/Pug, PHP, C#, HTML, CSS, HAML, Razor, Blade, NodeJS, Java, C++, Bash
Frameworks/Libraries	Nest, Next, Prebid, Snowplow, MaterialUI, Google Tag, Lodash, React, Laravel, Angular, jQuery, Bootstrap, MaterializeCSS, Foundation, Wordpress Genesis, Phalcon, Webforms, DotNetNuke, MVC 5
Operating Systems/Platforms	Windows, Linux, Mac OSX
Methodologies	SCRUM, Waterfall, Agile
Project Management	GitHub Projects, Jira, YouTrack, Zenhub, Trello, Basecamp, Assembla
Databases	Snowflake, MySQL, SQL Server, and PostgreSQL
Customer Service Management Systems	ZenDesk, YouTrack
Database Management Systems	PhpMyAdmin, SQL Server Management Studio
Software	Snowcat Cloud, Snowflake, Wordpress, Microsoft Office (Word, Excel, Power Point, Outlook), Visual Studio, Sublime Text, GitKraken, KDiff3, Adobe Creative Suite (Photoshop, illustrator, InDesign, Audition, Premiere), Mailchimp, CampaignMonitor, BrowserStack, Testize, Active Directory
Deployment	Jenkins, TeamCity, Git, Gitlab, Visual Studio Azure SDK
Cloud Platforms	Amazon Web Services, Google Cloud, Azure Cloud Services
Development Software Tools	Webpack, NodeJS, Docker, ESLint, Prettier, JSON Schemas, Bower, Gulp, JSPM
IDE	Visual Studio Code, Sublime Text, Visual Studio, Eclipse, Vim

Additional Credentials

Interests	Investing, Collecting, HomeLab, Home Assistant, Disc Golf, Cryptocurrencies, New Technologies, Web Design, Application Architecture, System Automation

References: Available Upon Request