

# NILAY KHANDELWAL

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Software engineer with 14+ years building high-scale, low-latency systems in ad tech and distributed platforms. Focused on system design, performance, reliability, integrations (SSP/DSP), and analytics/automation tooling. Lead production support and incident response.

## SKILLS

**Distributed Systems & Architecture:** High-scale, low-latency serving systems; distributed platform design; event-driven architectures; in-memory serving caches/entity lookups; aggregation pipelines; edge/CDN delivery; SSP/DSP integrations

**Data & Real-Time Systems:** MongoDB, Redis, Microsoft SQL Server, Apache Druid, Amazon Kinesis, RabbitMQ

**Cloud & Infrastructure:** Azure App Services, AWS (EC2, S3, Kinesis), Cloudflare, Docker, Terraform

**DevOps / CI/CD / Observability:** TeamCity, GitHub, New Relic, Kibana, Git

**Languages:** C#, SQL, JavaScript, Python, Java, PHP, VB.NET

## WORK EXPERIENCE

### Senior Software Engineer

*AdSupply Inc*

*June 2011 - Present*

Culver City, CA

Senior engineer on a real-time ad exchange and serving platform, focused on distributed systems, low-latency delivery, production reliability, and fraud mitigation. Contributed to .NET Framework to .NET Core modernization across a hybrid cloud environment (Azure and AWS).

- Optimized the core ad exchange and serving platform and contributed to .NET Framework to .NET Core modernization.
- Supported low-latency ad delivery at scale (approx. 1B+ daily requests; sub-100ms responses), integrating with multiple SSPs and DSPs.
- Tuned critical data paths with MongoDB and Redis, improving maintainability and performance of hot codepaths.
- Implemented pub/sub messaging to propagate database updates to live serving nodes, enabling in-memory entity lookups and reducing database reads on the request path.
- Improved reliability with production safeguards, including Cloudflare-based controls to mitigate traffic anomalies and overload.
- Enhanced observability via New Relic instrumentation/configuration and operational diagnostics (including Kibana).
- Owned fraud mitigation initiatives within the delivery pipeline to improve traffic quality and revenue integrity.
- Originated the Web Push ad format concept; built the initial prototype and early integrations; led subsequent team expansion.
- Owned ad unit delivery scripts and ad tags across browsers and partner constraints; led content-blocker compatibility work to improve delivery under common blocking techniques.
- Built internal tooling and automation: ASP.NET Core apps, JavaScript analytics utilities, and Druid-based tracking and aggregation workflows.
- Led support engineering and production issue resolution; participated in incident response/on-call and drove code/design reviews with senior engineers.

Selected initiatives: Adblock compatibility; compliance-driven flow and parameter changes; cross-browser tag debugging; overload and timeout mitigation; observability and runtime diagnostics improvements.

## **Software Engineer (Concurrent)**

*EventSorbet*

*December 2011 - April 2013*

Santa Monica, CA

An early-stage startup developing an event management platform, I worked as a Software Engineer, primarily focused on building and enhancing core platform features.

- Collaborated with the founding team on the initial setup of the platform stack using ASP.NET MVC, NHibernate ORM, JavaScript/jQuery for the UI, and Git for version control, ensuring efficient development and collaboration.
- Developed and optimized the event search feature, which became the primary method of interacting with the platform.
- Integrated Stripe payment service to enable credit card checkout, manage subscriptions, and streamline event vendor payouts, reducing manual processing for the internal team.

## **Student Programmer**

*University of Southern California*

*October 2010 - May 2011*

Los Angeles, CA

Worked at the School of Pharmacy developing in-house custom web and database applications in VB.NET.

- Developed a time tracking system for employees, enhancing operational efficiency.
- Maintained, tested, and documented code for internal employee support applications.

## **Associate Intern**

*OnGreen*

*May 2010 - August 2010*

Los Angeles, CA

Joined a Series A startup focused on building an online platform to help green startups connect with investors and raise capital.

- Collaborated with offshore engineering team to test and resolve platform bugs.
- Set up and managed a support ticketing system using osTicket on a managed LAMP stack server.
- Configured and maintained a phpBB user forum on the LAMP stack to facilitate interaction between platform stakeholders.

## **EDUCATION**

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### **M.S. in Computer Science**

*University of Southern California*

*2009 - 2011*

Los Angeles, CA

### **B.Tech. in Computer Science Engineering**

*Jaypee Institute of Information Technology*

*2005 - 2009*

NOIDA, India