NILAY KHANDELWAL

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Software engineer with 14+ years building and operating high-scale, low-latency ad tech and distributed platforms (approx. 1B+ daily requests, approx. sub-100ms responses). Focused on system design, production reliability and incident response, integrations (SSP and DSP), and automation tooling.

SKILLS

Distributed Systems & Architecture: High-scale, low-latency serving systems; microservices; distributed platform design; event-driven architectures; in-memory serving caches/entity lookups; aggregation pipelines; edge/CDN management; 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#, ASP.NET Core MVC, SQL, JavaScript, Knockout, jQuery, 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 delivery, low-latency performance, fraud mitigation, and production reliability, including monolith-to-microservices modernization.

Senior Software Engineer / Lead Support Engineer
2020 - Present

- Contributed to .NET Framework to .NET Core efforts, completed on-prem to cloud-native migration, and decomposed monolith components into microservices.
- Originated the Web Push ad format, built the initial prototype and early integrations, and led expansion of the format.
- Led production support and incident response, implemented Cloudflare edge controls, and enhanced diagnostics with New Relic and Kibana.
- Owned fraud mitigation initiatives within the delivery pipeline to improve traffic quality and revenue integrity.
- Implemented a rules engine microservice for real-time tracking (Apache Druid) and automated campaign management, reducing manual interventions for account managers and clients.

Software Engineer II / Support Engineer
2014 - 2020

- Led ad delivery compatibility work under common AdBlock and content-blocker techniques, owned ad unit scripts and tags across browser and partner constraints.
- Tuned request-path data flows with MongoDB and Redis, improving hot codepaths for performance and maintainability.
- 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.
- Served as escalation point for complex production issues, bridging client-side tag behavior and backend delivery logic, and drove code and design reviews.

Software Engineer
2011 - 2014

- Helped start the platform on a new stack, delivered customer-facing interfaces, and built reporting and analytics workflows.
- Built SQL-based reporting and analytics workflows to support business and operational needs.
- Expanded and maintained ad unit delivery scripts and tags as platform scope and partner integrations grew.

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

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