Nick Charney Kaye

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Director of Engineering

Resilient and forward-focused executive with extensive experience spearheading innovative software solutions while leading cross-functional teams.

Expert in architecting enterprise-grade broadcasting, identity resolution systems, and mobile applications with advanced features. Skilled in open-source development, fostering transparency, and attracting partnerships. Experienced in guiding technical strategy and creative direction for groundbreaking media platforms. Proficient in collaborative music composition software and its integration into streaming platforms, games, and interactive environments. Adept at revamping outdated frameworks into scalable, efficient templates. Proven ability to drive innovation, enhance user engagement, and boost revenue through strategic technological implementations. Committed to leveraging a unique blend of technical expertise and visionary leadership to advance engineering initiatives within dynamic corporate environments.

Areas of Expertise

- Project Management
- User Experience (UX) Design
- Microservices Architecture
- Mobile Application Development
- Full-Stack Development
- Product Innovation
- Cross-Functional Leadership
- System Architecture
- Data Segmentation

Technical Proficiencies

Programming Language & Tools:	JavaScript/TypeScript, Java, C++, C#, Objective-C, Go, Python, Ruby, Dart, HTML5/SCSS, Google Cloud Platform BigQuery/DataStream/Spark/Beam/PubSub/Firebase/Firestore, AWS Redshift/DMS/EMR/Glue/Kinesis/SNS/SQS/EventBridge/Amplify, MySQL, PostgreSQL, MongoDB, REST APIs, GraphQL, GRPC
Frameworks & Operating Systems:	React, React Native, Swift, Flutter, Unreal, Unity, Canvas, WebAudio, Phaser, Supercollider, Max/MSP/Jitter, Dash/HLS, OpenGL, GNU/Linux, BSD/macOS, Windows
Media & Communication:	Typography, Graphic Design, Animation, Audio production, Video editing, Adobe Photoshop/Illustrator/Audition/Premiere/AfterEffects/XD, Figma, Ableton Live

Career Experience

XJ Music, San Francisco, CA   **2016 – Present**
Director of Engineering

Led cross-functional teams in developing innovative audio streaming technology, focusing on integrating legal, financial, digital, and musical expertise. Architect and oversee the construction of an enterprise-grade HLS broadcasting system. Design and implement mobile applications with advanced features, including HLS audio streaming and in-app purchases.

- Secured U.S. Patent 10,446,126 for creating a groundbreaking system that generates nonstop musical audio compositions, driving innovation in music technology for video games, live streams, and ambient environments.
- Spearheaded and launched an open-source codebase in Java and C++, fostering transparency and attracting potential partners.
- Led a global team of designers, developers, and testers to collaborate on developing a unique open-source music production framework, integrating with Unreal Engine and fostering innovation in audio technology.
- Facilitated user testing in a dedicated UX lab, engaging diverse stakeholders, including audience listeners, developer community members, and video game music composers, to ensure optimal user experience.
- Navigated the Agile iterative process to deliver this groundbreaking technology on schedule, resulting in a patented system available for independent projects while securing commercial licenses with major video game studios.

Bioengineering Department, California Institute of Technology, Pasadena, CA (Remote)   **2022 – Present**
Director of Engineering (Consultant)

Collaborate with the principal investigator and Biological Engineering Ph.D. candidates to design infrastructure tailored for machine learning applications, optimizing neural network resource allocation and improving result reproducibility. Conducted regular personalized meetings with engineering team members, guiding them on technical issues while driving informed decisions on implementation strategies to elevate project outcomes.

- Engineered and enforced high-quality, testable software development life cycles (SDLC) while conducting code reviews to elevate team skills and ensure coding excellence.
- Designed and implemented proof-of-concept architectures for scalable machine learning platforms, enabling efficient, on-demand use of costly resources like Nvidia A100s and reducing unnecessary operational costs.

Endeavor, New York, NY (Remote)   **2022 – Present**
Lead Software Engineer

Provide technical guidance and leadership within the Consumer Experience team, contributing to the digital strategy and fostering innovation. Act as a key contributor to identity resolution, customer metrics acquisition, and mobile app development for major events, resulting in higher user engagement and revenue growth.

- Enhanced the Hyde Park Winter Wonderland mobile app, leading to 6M users in the first week and a 12% increase in event revenue.
- Improved the Barrett-Jackson Auto Auction mobile app, attracting 2M users in the first week and boosting event revenue by 17%.
- Optimized the Professional Bull Riding mobile app to track 10K statistics in near-real time, contributing to a 15% rise in event attendance.
- Established a competitive edge for Endeavor portfolio companies by consistently delivering successful digital solutions.
- Engineered AAA user experiences for high-traffic mobile applications using React Native, optimizing performance across iOS and Android platforms during major release events to enhance user engagement and app stability.
- Revamped an outdated React Native framework into a cutting-edge, scalable template to elevate development efficiency and product quality.

Goodwater Capital, Burlingame, CA   **2019 – 2021**
Lead Software Engineer

Designed and deployed distributed streaming microservices to curate millions of deals, optimizing mobility processes. Directed pod information architecture, collaborating with front-end engineers to shape API design.

- Partnered with analysts to create services that reduced a 30-day manual process to a 5-second AI-driven task, followed by just 3 days of manual review, enhancing daily workflows and portfolio operations.
- Streamlined 20+ data ingestion processes from a 1M-line POC Java monolith, cutting processing time from 1 day to 1-4 hours and reducing virtual machine usage from hundreds to fewer than 10, thereby enhancing system efficiency.

CredSpark, Brooklyn, NY   **2012 – 2019**
Lead Software Engineer

Liaised with the founder to refine brand fundamentals, information architecture, and industrial design. Created the company logo, trade show environments, digital assets, and merchandise.

- Accelerated the development of minimally viable products, driving early user engagement and market traction for a two-sided platform, laying the foundation for growth and adoption.
- Pioneered and implemented innovative UI enhancements, boosting user engagement and increasing value capture from the existing user base, enhancing customer retention and satisfaction.

Signal Digital, Brooklyn, NY   **2014 – 2017**
Senior Software Engineer

Redesigned and integrated the front end of an acquired email marketing platform into the primary product, aligning with core brand standards. Implemented React-based frontends for enterprise products, enabling advanced segmentation of first-party datasets.

- Spearheaded full-stack development on a Skunk Works team, consistently slashing week-long workloads to mere minutes, boosting operational efficiency.
- Collaborated with b2b partners to design and implement custom dashboards, enabling stakeholders to rapidly assess metrics, determine priorities, and take direct action to modify workload schedules.
- Engineered and integrated dashboards and tooling for 70+ engineers, maintaining 6σ uptime and supporting 1T+ daily transactions, ensuring system reliability at scale.

Additional Experience

Software Developer | Art Director, Independent

- Pioneered a cutting-edge online platform for David Blaine's 7-day stunt, garnering 300K fan messages.
- Contributed to groundbreaking projects at industry-leading agencies, including Big Spaceship, Foundry9, Cheil, 360i, Transistor Studios, Smuggler, and RadicalMedia.
- Produced and animated a U.S. Department of Justice PSA, achieving nationwide exposure through Oxygen, NBC, and CBS.
- Partnered with the CEO of Stetson to revamp the 150-year-old brand with a modern, dynamic web platform, driving brand rejuvenation.
- Created the viral video Colgate Wisp: Quick Draw, introducing one of the first consumer engagement campaigns and enhancing brand visibility.
- Developed an internal compliance training platform for AIG, improving training efficiency and regulatory adherence.
- Oversaw digital campaigns for Kraft brands, including Lunchables, Philadelphia, and Tassimo, enhancing brand engagement and visibility.
- Integrated HTML5 animation for Nintendo and Hewlett-Packard campaigns, advancing the effectiveness of digital advertising.
- Crafted online advertising strategies for Activision, Chase, Columbia, Freddie Mac, Sallie Mae, and Samsung, amplifying digital marketing reach and impact.

Education

Bachelor of Arts, Film & Music
NYU Tisch, Maurice Kanbar Film & TV | Clive Davis Institute of Recorded Music

Bachelor of Science in Business
University of Phoenix, Phoenix, AZ