Zack Birkenbuel

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About Me

Senior full-stack engineer / architect / technical lead with 18 years of industry experience. I'm driven by creative problem solving, shipping frequently, and iterating with design teams to deliver the best possible end-user experience. I work best on diverse, cross-discipline teams with broad responsibilities.

Skills

Client Technologies: JavaScript (ES5/ES6), React JS, Relay, HTML5/CSS, C#, Swift, Java, Flash, Silverlight

Service Technologies: Hack/PHP, GraphQL, Node.js, ASP.Net, nginx, Redis

Database Solutions: MsSQL, MySql, Oracle, DynamoDB, Postgres, Mongo DB

Infrastructure: Amazon EC2 & VPC, Microsoft Azure, Jenkins

Process: Scrum/Agile, roadmap planning, task breakdown, YouTrack, Jira, TFS

Team: Conducting interviews and hiring, managing contractors, mentoring, project leadership, design review, and unit test advocacy

Work Experience

Facebook – E6 Tech Lead – June 2017 to present

- Developed the "Conversation Guide" product on facebook.com and the GraphQL back end to power mobile Guide experiences.
    - The Guide product would suggest comment prompts or comment augmentations to a user based on story context and their usage history.
    - Designed and developed a modular system for Guide on facebook.com that allowed for new suggestion types and dynamic behavior changes during experimentation.
- Instrumented and captured metrics for all news feed sharing activities in Facebook and Messenger apps across all platforms.
    - Adding logging and telemetry to capture user flow throughout the sharing process and across app boundaries.
    - Processed incoming data into a set of metrics used to make business decisions and gain user insights.
    - Developed operational dashboard and alarming to ensure sharing product health during future experiments.
- Lead development of a revamped News Feed sharing flow on mobile platforms to optimize for engagement on shares in news feed.
    - Collaborated with UX to design a flow that encouraged user participation without cannibalizing use of other share options.
    - Drove a 17% increase in shares created with text on mobile platforms, which each drove 4x the engagement of shares without text.
- Designed and reviewed production experiments during all phases of development.
    - Performed extensive data and metrics analysis to model user behavior.
    - Evaluated goal criteria and decided next steps for each iteration during product development.
- Conducted project planning and road-mapping to ensure projects were deployed on time and feature complete.
- Conducted interviews and recruitment of new hires to grow the News Feed team.
- Mentored junior engineers on technical and career growth best practices.

HBO – Senior Staff Architect – March 2013 to June 2017

- Designed and implemented HBO's client localization workflow. Process was structured to provide a minimum of impact on day-to-day developer activities while still providing an easy integration point for localization vendors.
  - Collaborated with Design/UX to perform a localization/globalization audit and developed best practices to maintain localizability of HBO GO applications going forward.
- Migrated hbogo.com from a monolithic Flash application to a client-side JavaScript application.
  - Migrated hosting infrastructure to EC2 and built deployment pipeline.
  - Shipped further product enhancements including Live Streaming, interactive features during *Vice News Daily*, and improved performance on lower powered computers.
- Developed Google Chromecast integration and on-device software allowing HBO to be available as a launch partner.
- Designed and implemented a deep link translation service to enable moving HBO GO clients from a legacy Java service to a new global service stack.
- Designed and implemented a highly scalable authentication provider to enable multi-million user load testing. By removing dependency on 3rd party partners during tests, HBO was able to prepare for high profile launches with confidence.
- Conducted weekly interviews and screens to help staff from 10 to 120 engineers.
- Mentored junior engineers and ran the HBO intern project.

343 Industries – Senior Lead Engineer: Halo Waypoint Clients – March 2011 to January 2013

- Led development of three all new Waypoint clients.
  - Designed Waypoint for iOS and Android. Clients were developed using HTML and JavaScript wrapped in the PhoneGap development platform allowing for rapid iteration and common code across platforms.
  - Coordinated development of the Halo 4 Stats app – a responsive web app for desktop and mobile that mimicked the Halo in game UI.
  - Updated Halo Waypoint website to be highly testable, scalable, and more modular by moving to an Inversion of Control development pattern.
- Upgraded authentication and authorization systems to be centralized for all web properties and use the OAuth 2.0 protocol.
- Migrated server-based Waypoint clients from a dedicated datacenter to the Microsoft Azure cloud computing platform, allowing the sites and services to scale out to meet increasing demand leading up to the launch of Halo Anniversary and Halo 4.
- Improved site reliability and test ability by implementing an improved logging system, performance monitoring, and a distributed caching system to provide resiliency against service outages.

Microsoft (Xbox LIVE/Xbox.com) – Lead Software Development Engineer – July 2006 to March 2011

- Led a team of four full time employees during the "Berlin" release of xbox.com.
  - Performed a ground up rewrite of the underlying xbox.com codebase.
  - Redesigned the global shell and styling with a focus on ease of use.
  - Redesigned the "My Xbox" social experience (Friends, Messages, Gaming History, etc.)
  - Implemented the Web Avatar Editor for initial release.
- Developed and launched the Xbox Web Marketplace providing the ability for Xbox LIVE customers to purchase movies, TV shows, music, games, and game add-ons via the web and have purchases delivered to their consoles.
- Developed Zune.net versions 1 and 2 with special focus on branding ease of navigation.
- Adopted and promoted the use of Scrum/Agile development process.

Microsoft (Advanced Technology Group) – Software Development Engineer – November 2004 to July 2006

- Managed a pool of contract employees working on internal tools.
- Designed and developed a global issue tracking system.
  - Replicated issues and attachments between EUR and US regions via web service and secure file transfer.

- o Provided a centralized location for reporting certification issues, reducing redundancy and increasing Microsoft's certification team's throughput.
- Designed and developed Outlook-like web interface for support issue tracking for Xbox Developer Support.
- Updated the Xbox Developer Support website to support the Xbox 360 launch.
- Coordinated with project management team during initial requirements gathering and UI design to head off implementation issues.
- Determined hardware requirements for internal tools project.

Solutions IQ & Volt (Contractor for Microsoft) – Web Developer – January 2000 to November 2004

- Redesigned and rebuilt the Xbox Developer Support website.
- Developed internal tools for the Xbox Advanced Technology Group.
  - o Designed and implemented the Xbox title certification tool use for tracking the progress of all games on the Xbox platform.
  - o Implemented an Account Manager CRM portal.
- Served as technical lead and mentor for 3 other contract employees.

Formal Education

Bachelor of Science in Electrical Engineering (Robotics) – University of Washington - 2001

Culture, Personality, and Trivia

I'm a firm believer that there are interesting problems and projects in any technology space. I value an open and collaborative environment above all else when looking at a workplace. I've been programming since I first discovered Basic on the TRS-80. I've been cursed on two continents and blessed on three.