Zachary J. Bragg

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Objective:

I am at a point in my career where my professional appetite goes beyond solving technical problems. I am seeking increasing levels of influence and impact through my proficiency in digital systems design and implementation. Given the right opportunity, my skills will have a powerful impact on my community and industry.

I build and oversee APIs, tools, websites, games and prototypes. I am a well-rounded architect specializing in delivering world-class services and experiences. Additionally, I have a passion for order and organization; enabling accurate scope estimates; as well as the vision needed to task and drive high-output sprint teams.

If any of this resonates with you, I may be a great fit for your team and would enjoy talking about future employment.

Professional Technical Experience:

Vice President of Technology – KEYSYS – Birmingham, AL | Aug 2019 – Present

- **Hydrangea 2.0 (CMS)** – Led and expanded KEYSYS' proprietary CMS offering
  - Planned and communicated all road-mapping and vision decisions
  - Added proper repository branching / forking to accommodate a larger amount of clients
  - Modularized (AMD) all JavaScript code via RequireJS
  - Supported 6+ production sites for our clients – Migrated all 1.0 platforms over to 2.0+ to take advantage of the latest code and patterns
  - Achieved sub-second web-client page loads with advanced client-side caching abilities
  - Upgraded and enhanced the platform with methodical rigor (from 1.0 -> 2.1+)
    - Added advanced SEO module for SPA Sites
    - Added custom site indexing and searching via Algolia Search
- **Live Service Operations** – Helped KEYSYS compete in the Pickleball web service niche market
  - Extended Hydrangea to quickly build out a SignalR Events API layer for real-time game tracking
  - Integrated the data model from our Mobile Referee App to drive the game data
  - Ran the live services for 2 Pickleball Tournaments
  - Built out the tournament & match tracker views to broadcast game updates to the public
    - https://live.pickleballrefereeapp.com/
- **Pre-sales and architecture contributions** – Led KEYSYS' efforts to penetrate larger accounts
  - Produced and delivered demos and other sales materials to illustrate the value of Hydrangea
  - Leveraged the value of Hydrangea to produce speedy, affordable PoCs for potential customers
  - Added a new Hydrangea customer and courting several others
  - Built-out exciting employee engagement features
    - Event Calendaring
    - Department Announcements (Twitter-esque)
    - Advanced Blogging
    - Mapping Interactions - https://westerveltwildlife.com/leases/
      - Google Maps / Earth API integration
      - KML Layering
      - Custom data points & Clustering Features
- **Genomic Educational / Serious Game** – C# Unity3D 2019 / 2020
  - Executed on an aggressive timeline to turn-around a build for a remote Beta1 play testing event
  - Architected a novel and engaging comic book style narrative delivery system
  - Uncovered salient player feedback; essential for shaping our final development efforts
  - Upgraded activities to better reflect learning targets

Software Architect – KEYSYS – Birmingham, AL | Jan 2018 – Aug 2019
- **Pre-sales and architecture contributions** – Essential to landing new high-profile clients
    - Delivered all projects within ~10% of time and labor estimates
    - Set records for the largest single deal-size
    - Led development and project teams through all milestones and deliverables
    - Clients included: LendingTree, HudsonAlpha, Westervelt
- **Content Management System** - Directed KEYSYS on how best to rearchitect and rebuild its existing CMS
    - Created a new product offering: Hydrangea 1.0, an API-first, headless CMS with accompanying toolsets for building front-end sites faster than ever before, with a high degree of code reuse.
    - Designed a cloud-friendly API Layer for integrating S3, ECS, and other REST-ful endpoints
    - Implemented a robust, flexible JWT authorization system with modular validation (AD / Okta) with variable expiration windows as well an optional refresh-token feature.
    - Left the front-end unopinionated to accommodate future build-vs-buy decisions to build the best user experiences.
    - Applied MongoDB best practices to empower the most flexible data layer at KEYSYS
- **Genomic Educational / Serious Game** – C# Unity3D 2018/2019
    - Led a team of game developers and artists to produce iterative builds for the customer
    - Designed durable systems to achieve animations, sounds and other engaging effects
    - Worked to merge academic learning targets with fun and interesting game mechanics
    - Provided essential direction for the initial Alpha play testing event
    - Maximized the client budget by acquiring free open-source and high-quality paid art assets
- **Significant development contributions** to existing projects for key accounts
    - Resolved bugs and created features across the entire web stack
    - Worked in a variety of languages: C# Framework, Dotnet Core 2+, Angular 4+, PHP 7
    - Optimized API response times & front-end page load times
    - Developed reusable patterns for creating custom dashboarding and charting assets

Sr. Front-end Web Developer – Microsoft Xbox – Redmond, WA | Jan 2017 – Dec 2018
- **Cross-platform HTML5 Video Player** – Rich client experience built on a highly-scalable Azure infrastructure
    - Redesigned and implemented the frontend experience
    - Worked with design and media teams to deliver cross-platform content to millions of viewers
    - Reduced client error reports by over 90% and resolved dozens of bugs
    - Designed and implemented a focus model to unify the input across controllers, mouse, and touch
    - Designed a way to load externally developed modules that render dynamic content
    - Built the animation framework shared among the modules
- **Xbox Assist - Centralized Help App** - Web-hosted (node.js / Angular4) console application
    - Provided guidance on UI layout, events, and controller input handling
    - Developed prototype and final web pages over several iterations
    - Enabled the Built-in Text-to-speech to properly describe the UX to visually impaired users
    - Designed advanced CSS layouts to achieve the XboxOne styles for both RTL & LTR audiences
    - Surfaced personalized content via the Xbox backend services

Game, Web, & Tools Developer - PlayFab – Seattle, WA | Nov *2014 – Nov 2016*

- **Game Developer** (Unity / C# & JavaScript / HTML)
    - Designed, developed and released *Unicorn Battle*: a fully documented, open-source example project
    - *Unicorn Battle* is used as the defacto PlayFab demo
    - Maintained the game by fixing bugs and incorporating new PlayFab features
    - Available on Google Play and iOS via TestFlight
    - https://github.com/psycrowStudio/UnicornBattle
- **Web Developer** (Sails.js / node.js WordPress, CI Jenkins deployment to AWS)
    - Chiefly responsible for https://api.playfab.com, the #1 resource for PlayFab's API documentation
    - Maintained dynamic documentation via sourcing the latest data from a public repo
    - Lead the redesign efforts with an external design team
    - Built a responsive CSS template for the API site and two community sites
    - Maintained the site and added new features and content as PlayFab expanded
- **Tools Developer**:
    - Designed, developed and released *Editor Extensions*, PlayFab's official Unity3d Plug-in
        - https://github.com/psycrowStudio/UnityEditorExtensions
    - Developed a backend-cloning tool that can be used to clone Unicorn Battle to your own PlayFab title
        - https://github.com/PlayFab/UnicornBattle/wiki/1-Unicorn-Battle-Backend-Guide
    - Designed and developed PlayFab "*recipes*" as easy-to-learn on-ramp for new developers
        - https://github.com/psycrowStudio/PlayFab-Samples
    - Contributed to PlayFab's cross-platform SDK & plugin development efforts

Design Integrator & UX SDE - Microsoft Power BI, Redmond, WA |April 2014 – Nov 2014

- **Delivered high impact, responsive visual components built to the Office365 design guidelines**
    - Built charts, sliders, panels and other elements in D3.js, SVG, and HTML5/ CSS3
    - Used data-centric design motifs such as color ramping and scaling to highlight data insights
    - Collaborated with user-research to deliver components that met UX testing parameters and goals
- **Assisted in designing and developing marketing landing pages and HTML email templates**
    - Built responsive & mobile friendly HTML 5 / CSS 3 / JavaScript deliverables
    - Built ExactTarget HTML templates for use in an upcoming email marketing campaign
    - Participated in regular reviews to critique design specifications and proposals
- **Served as an Ad-Hoc resource to augment their front end and visualization development teams**
    - Became familiar with the Angular.js library and implementation patterns
    - Served as a liaison for the design and development teams to clarify priorities for visual bugs

AAA Tools Developer (SDE) - Microsoft Studios: Games Test Organization, Redmond, WA |*July 2013 – Feb 2014*

- **Dedicated *3rd party* gameplay hook developer (C++)**
    - Wrote 'hooks' into the game code that were used by the test organization to achieve title test goals
    - Built a C# operating model that shares the hooks to any future title testing tools
    - Designed / built the UI used by the test team to fire Xbox actions from their PC
    - Automated a manual Perforce syncing process to ensure our design doc repository was always available to our design and production teams
- **Developed C# APIs, UIs and database layers for the GTO tools pipeline**
    - Contributed to an internal tool used by the organization to support 1st and 3rd party XboxOne titles
    - Designed / built the UI for a DVR-style recorder for saving gameplay
    - Designed / built the UI and data layers for a tool to highlight content changes between builds
    - Built a Perforce API wrapper library to expedite many of our studios most common tasks
    - Wrote automated test cases for all code that went into production
- **Ad-hoc gameplay tester for XboxOne launch titles**
    - Zoo Tycoon, Forza Motorsport 5, KillerInstinct, Sunset Overdrive, Ryse

Lead Unity3D Developer - National Center for Telehealth & Technology, Tacoma, WA | *April 2012 – July 2013*

- **C#: Unity Player / Data Server: <u>Virtual LifeStyle Coach</u>** *– An A.I. based, engaging weight loss experience*
  - My initial designs were central to T2 winning the funds to grow their game therapy research
  - Kicked off a larger team to accommodate the new work
  - Coordinated animation requirements to ensure proper integration between our API and Face FX's
  - Designed the speech portions of our demo; used FaceFX 2013 to lip-sync our avatar's speech
  - Designed & built a dialog decision tree editor tool to manage the order and content of the avatar
  - Integrated incumbent GUI Libs and extended more functionality to the designers
  - Documented all the 2D art needs for the GUI and HUD systems
- **C#: *PC / Mac Web / Server: <u>T2 Virtual Hub</u>:*** *- A "2nd Llife"-style MMO social experience*
  - Was accountable for the art and code development throughout this project's development
  - Coordinated the modeling vision for environment
  - Reused the majority of our previous assets to expedite progress
  - Designed & built reusable menu components that made management of dialogs and menus easy
  - Designed & built an object system to manage the many 3d scene objects
  - Designed & built a lightweight UI system designed for custom skins
  - Built a hybrid FPS / TPS camera rig
- **C#: *PC / Mac: <u>Virtual World Kinect</u>*** *– An experimental project using Kinect for remote treatment*
  - Self-ran and managed throughout this project's development
  - Designed a simple scene constructed with premade assets
  - Got the MS Kinect hardware to control a 3d Avatar in an interactive, multiplayer environment
- **C#: *iOS: – <u>Soldier Rush</u>*** *– A "Temple Run"- style maze runner designed to teach the symptoms of PTSD.*
  - Enabled the project to meet its goal by designing level building & customization tools
  - Rebuilt the level system into a robust random segment re-cycler (for performance reasons)
  - Designed a camera swiveling animation component to produce a smooth turn transition
  - Optimized graphics & performance for iOS @ 30FPS

Production, Project and Account Management Experience:

Technical Developer Evangelist - PlayFab – Seattle, WA |Nov *2014 – Nov 2016*

- Assisted with the management PlayFab's external developer community:
- Authored tutorial documentation for PlayFab's sample projects
- Provided SDK Support across many platforms (forums, emails & dedicated to customer)
- Authored and presented content for webinars conferences & live coding sessions
- Participated in conference marketing and awareness efforts (GDC, Unite, PAX, PoP, SIX)
- Authored and reviewed PlayFab blog posts
- Assisted in organizing and running PlayFab's first Game Jam & Developer Workshop
- Organized and operated quality A/V live-streams

Technical Account Manager - Microsoft Services, Redmond, WA | July 2009 – Feb 2012

- Lead cross-functional, customer-focused teams that consist of engineers, salesmen, and external vendors
- Mediated customer and 3rd party disputes
- Served as the leading advisor for what can be done for both the customer and Microsoft
- Shared the Intel account, an account with annual revenue of $30+ million and was directly accountable for ~$2 million
- Reported weekly to directors on the growth and consumption of my 8 customer contracts
- Other Customers Included: Nintendo, Alaska USA, GCI, & Alyeska Pipeline
- Managed the daily needs of my customers' IT and development departments
- Managed 90% of my relationships over phone and email and the other 10% onsite
- 100% of my surveyed external customers were satisfied with my performance, 87% are very satisfied

Education:

B.S. in Business Administration, The University of Alabama, May 2009
Major: Management Information Systems **Minor**: Computer Science
Spoken Languages: English / German
Game Development Tools: Unity 3D 3.x / 4.x / 5.x, FaceFX, Wesnoth Editor, Adobe CS, Visual Studio, UDK 3 & 4 (working familiarity)
Certifications: ITIL 3.0 Foundation, MOF 4.0, PSMR

Academic Projects:

- **Technical Process Analyst -** NUCOR Steel, Tuscaloosa, Al | *Jan. 2009 - May 2009*
    - **L**aid the groundwork for NUCOR's BI initiative
    - Mapped SQL data to steel processing phases
- **Technical Process Analyst -** http://adeca.alabama.gov | *Aug. 2008 – Dec. 2008*
    - Worked with Google Maps API to tag and display local facilities
    - Built out a **.**ASP Portal Site to host and serve the program's information
- **Business Process Liaison Intern -** International Paper, Memphis, TN | *May 2008 – Aug. 2008*
    - Acted in a liaison role to document requirements and bridge communication gaps between the Business and IT Department
    - Mapped processes, performed risk analysis to identify major gaps in current processes. Recommended solutions
- **Process & Logistics Intern –** Mercedes Benz, Vance, AL | *May 2006 – May 2008*
    - Tracked & reported anomalies. These reports tracked the anomalies cost / impact on the plant's production
    - Automated the logistics storage data input
- **Web Developer –** Multiple clients throughout college
    - Delivered several static and Dynamic sites to various teams and departments
    - Basic **LAMP** Stack Sites with basic CSS & HTML front-ends
- **C++ Rock-Paper-Scissors Game**
    - Several simple AI programs
    - Used WFC to build GUI
- **PHP Scavenger Hunt Game**
    - Team was tasked with finding a creative use for a provided portable GPS device
    - Created a customized interface to enter GPS data into a web page
    - Cellular GPS device retrieved an update from the webpage after reaching each intended destination
- **C++ Black Jack Game**
    - Console based Black-Jack Game that provided a simple hint system to the player