

Heber Billings

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Professional Experience

Principal Software Engineer | Indeed.com | 2022 – Present

- Architect for Indeed's Access Management systems, used by 121 connected client systems to power Employer scenarios that drive Indeed's revenue.
- Fostered a culture of operational excellence through operational reviews, post-mortems, and prioritizing resilience as a product, enabling systems to serve 55k permission checks/second at 99.999% uptime.
- Created and maintained a GraphQL library of Authorization Directives to optimize checking access. The use of these directives spread organically through 150 of Indeed's sub-systems, proving out the quality and time savings they provided.
- Supported and mentored 17 SWEs on 3 different teams working on Access Management adjacent projects.
- Worked with teams to develop a collection of AI rules and prompts added to our repos to ensure quality AI results.
- Architected the Access Management team's shift to a platform model, de-coupling partner teams from dependencies and maximizing resource utilization to support development across multiple product lines simultaneously.
- Set up an asynchronous flow using Kafka of permission change events which provided an opportunity for other Indeed teams to trigger custom actions (such as sending notifications).
- **Terraform** | Implemented service's own Terraform workspace to ensure all the service's requirements were co-located in the same repository.
 - Ensured Indeed's standard of Infrastructure as Code was followed.
 - Enabled all changes for a project were contained in a single merge request.
 - Created several Terraform modules to standardize the Datadog dashboards which increased the readability of Access Management dashboards and alerts.
- **ReBAC Service** | ReBAC (Relationship Based Access Control) service that added a new layer of permission features.
 - Drove initiative to migrate Indeed's permissions architecture from RBAC to ReBAC (Relationship-Based Access Control) to enable fine-grained permission scenarios. Worked with multiple vendors to evaluate ReBAC offerings, resulting in adoption of SpiceDB while saving \$280k yearly through precise provisioning estimates.
 - Directly resulted in the successful onboarding of 100K users previously prohibited from the platform.
 - Managed vendor API integration by developing a standardized wrapper service, simplifying client implementation and ensuring compliance with internal engineering standards.
 - Established a scalable access control architecture (ReBAC) to support and facilitate the development of all future permission-based features.

Senior Vice President of Software Engineering | Nexio (Previously Complete Merchant Solutions) | Orem, UT | 2017 – 2022

- Payment processing APIs maintained a 99.999% uptime.
- Orchestrated four teams of developers to meet company goals (3 on premise, 1 outsourced).
- Increased connected 3rd party APIs from 10 to over 40.
- Fostered an environment of growth, safety, and trust, minimizing developer turnover.
- Spent 40% of time on a team working with the code (stories, bugs, testing).
- Implemented highly decoupled microservices for stability, reliability, and deployability.
- Created a payment processing API suite from the ground up.
- Started and taught the developer lunch and learn program as well as the Nexio leadership monthly training.

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- Wrote a system to generalize vendor payment APIs into a maintainable system.
- Designed/coded/maintained a connection with over 75 payment services APIs.
- Created a payment routing system to maximize uptime for partners.
- Implemented event driven architecture to handle real time requests and scheduled ETL processes.
- **Transaction Service** | Micro-service for deduplicating transactions from many financial institution systems.
 - Read data from REST APIs, webhooks, and SFTP fixed width file dumps.
 - Processed up to 300,000 transactions a minute in a prioritized order.
 - Normalized the data of transaction reports from the top US banks and merchant gateway services.
- **encrypt-laravel-5** | Open source library for nodejs to encrypt values the same way as PHP's Laravel framework.
 - Over 100 weekly downloads on npmjs.com.
 - Zero open issues.
 - Served on the CEO's chosen team for prototyping and conference keynote demo software.

Software Architect (UX Team Lead) | InsideSales.com | Provo, UT | 2014 – 2017

- Created a custom AngularJS library for internal development teams.
- Quickly deployed prototypes for proof of concepts web apps.
- Jump-started all new web app products' front ends by using our developed tooling for prototyping.
- Served on the CEO's chosen team for prototyping and conference keynote demo software.

Director of Engineering | Fishbowl Inventory | Orem, UT | 2005 – 2014

- Started as a junior developer and worked up to the head of engineering.
- Ensured the constant improvement of all developers through pair-programming, async code reviews, formalized training.
- Worked with company partnerships, vetting their tech stack and building implementations for shared revenue value.

Education

Bachelor of Science in Applied Mathematics : Weber State University | Ogden, UT | 2005

Leadership

- Negotiated between developers and designers for speed, cost, and aesthetics.
- Led the development teams to over 90% code coverage.
- Participated in regular managerial review meetings to improve personal and team performance.
- Built a relationship of trust and respect with coworkers to the point of becoming a reservoir of intelligent opinion and cross-directional perspective.
- Orchestrated meetings and documents in preparation for approved new procedures and standards to better refine company processes.
- Trained employees on proper use of company tools and equipment, improving effectiveness of employees and safety of those participating with employees.
- Kept employees trained and motivated on new technologies including, but not limited to: Java(5,8,17), Kotlin, Typescript.
- Maintained operational flexibility, which allowed for proper flow of projects and quick reaction to unexpected situations of urgency.