

Joseph Hallenbeck

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Work Experience

Senior Software Engineer, Renaissance Learning, Wisconsin Rapids, WI (Remote)
01/2024 — Present

- Senior back-end role working on the EduClimber product which provides mandated MTSS reporting for schools and guidance counselors in domestic and international markets. EduClimber was an acquisition with few of the existing staff carrying over from the original team. Worked on documenting existing and new process for a steadily growing team of developers.
- Managed twice weekly production releases to AWS environments and maintained infrastructure configuration through Terraform and Terraform Cloud (e.g. Infrastructure as Code).
- Addressed concerns around data authorization and optimized middleware for determining appropriate levels of access for teachers and staff to student records that met US and EU student privacy regulations. Maintained data storage systems subject to SOC 2 reporting and compliance.
- Lead an interdisciplinary team that developed a secure method of parent-teacher communication via email and a parent portal that fulfilled the requirements of Wisconsin Act 20. Resulting project moved Educlimber away from SMTP towards a serverless architecture using AWS Lambdas and queues to process email batches through SES with high availability, care for rate limits, respect for bounces, logging (via DataDog), and the ability to capture and retry failed messages.
- Processed data requests from client school districts requesting detailed custom reporting from back-end services.

Senior Developer, Fullbay, Phoenix, AZ (Remote) 12/2018 — 10/2023

- Worked in a fast-growing SAAS start up serving the heavy-duty equipment repair industry. Scaled team from two to over a dozen individual contributors in the first year while introducing Agile principles, git-flow, and test-driven development.
- Presented internal talks on test-driven development, unit test design, application security (OWASP Top Ten) and the PHP Standards Recommendations (PSR).
- Mentored junior developers through constructive code reviews, pairing, code walks throughs, and documentation.
- Migrated early back-end MVP written in a custom PHP5 framework to PHP8+ using the Larval 10 framework.
- Paired with external partners to co-develop interoperable REST and event-driven APIs that coordinated client services in processing invoices, alerting partners of workflow events, and GPS coordinates of on-site technicians.
- Implemented point of sale software that processed \$2+ million monthly card terminal, card-not-present, ACH, and fleet check transactions through multiple payment processors (WorldPay, Payrix, Authorize.net, Stripe, and RoadSync).
- Developed an event-based system that notified customers of workflow progress through emails, pop-ups, and text messages (via Twilio).
- Used AWS services (Cloud Formation, Lambda, SNS, SQS) and Nodejs to create an event-based routing system allowing for concurrent and “eventually consistent” operations to be offloaded from the main client-facing server and onto a distribution of services.

- Automated deployment of test and development sandboxes by containerizing our services using Docker.

Software Engineer, Research Square, Durham, NC (Remote) 1/2015 — 11/2018

- Supported legacy software and new feature development of an enterprise Zend Framework PHP application responsible for directing workflows and task assignment for a team of 300+ remote editors and translators
- Spearheaded project to migrate 500,000 invoices from an internally built accounting suite to ZohoBooks. Evaluated potential external accounting suites for suitability. Maintained record integrity of new transactions while actively migrating existing records.
- Refactored a 1.4 million line monolithic PHP application into smaller business contexts through the application of Domain Driven Design principles to create a hexagonal event-driven architecture.
- Practiced Scrum-based project management, management, unit testing, code reviews, and pairing to maintain team cohesion and project success

Developer, 44Interactive, Sioux Falls, SD 1/2013 — 12/2014

- Developed a bespoke e-commerce platform using Laravel that featured inventory management, shopping carts, and credit card transactions through Authorize.net. Clients included local golf courses and country clubs who used our cart to process annual club memberships and tee-times.
- Completed the front-end development of and launched over 80 client websites. Front-end work included vanilla Javascript development of HTML5 drawing tools, interacting with API back-ends, and interfacing with Facebook, Google, and Cakemail APIs.
- Increased production system up-time from 97% to 99.99% on a server that saw 50k+ unique visitors per day and reduced server costs by 50%

Developer, Gage E-Services, Sioux Falls, SD 7/2011 — 1/2013

- Worked directly with clients to develop Joomla and Wordpress sites.

Lead Park Ranger, Jewel Cave National Monument, Custer, SD 5/2008 – 9/2011

- Conducted interpretative programs of 90 minute public talks on cave geology.
- Mentored new rangers and assisted with training and performance evaluations.
- Edited, wrote, and designed layouts for full-color activity booklets, annual newspapers, advertisements, trail maps, and press releases

Skills	<u>Back-End:</u>	PHP, Javascript (Nodejs), SQL, Shell, Python, and Go
	<u>Front-End:</u>	HTML, CSS & CSS pre-processors (Sass, Less), Javascript, Htmx, Bootstrap and L ^A T _E X
	<u>PHP Frameworks:</u>	Laravel, Zend Framework 1 & 2/3, and Slim
	<u>API Integration:</u>	Salesforce, Quickbooks, ZohoBooks, Google Maps, Paypal, Authorize.Net, Worldpay, Elastic Search, Postman, ability to design and implement REST and service-oriented APIs
	<u>DevOps:</u>	Terraform, AWS, Linux (native and WSL), Docker, Ansible, DataDog, NGINX and Apache HTTP server administration, MySQL/MariaDB databases admin
	<u>Version Control:</u>	Git and SVN
	<u>Application Security:</u>	OWASP, various authentication methods (Basic, Digest, OAUTH, JWTs)
	<u>Architecture:</u>	Test and Behavioral Driven Development (PHPUnit, Pest), Domain Driven Design, design for distributed systems (microservice architectures, event and message driven architectures, serverless), strong background in object orientated programming, and database design.
	<u>Soft Skills:</u>	Excellent technical communication skills, familiarity with graphic design and UI/UX, familiarity with common software development methodologies (Agile, Scrum, etc.), git-flow, pair programming, code reviews, and working in a continuous deployment environment.

Education	Real Time Interactive Simulation , DigiPen Institute of Technology, Bellevue, WA Courses Taken: Linear Algebra, Calculus I, Computer Environment I & II, Operating Systems I, C Programming Language, C++ Programming Language
	B.A. Philosophy and English , Augustana College, Sioux Falls, SD, 2009 Graduated Magna Cum Laude, Dean's List (all semesters), Sigma Tau Delta Literary Honors Society
	Visiting Scholar , Harris-Manchester College, University of Oxford