

Jesse Mack
Software Engineer
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TECHNICAL SKILLS

Languages: PHP, Javascript, TypeScript, Python, SQL, JSON, HTML, CSS

Frameworks: Node.js, React, Express, Socket.io, jQuery, AJAX, tRPC, Astro, SASS

Tools: Linux, Docker, Git, MySQL, PostgreSQL, Apache, Nginx, Websockets, Unit Testing

EXPERIENCE

Software Engineer

October 2019 - Present

Freelance

Remote, U.S.

- Achieved a 5x improvement in PostgreSQL database read times by optimizing field indices and queries
- Effectively addressed more than 40 critical bugs by detecting them through employed unit and integration tests
- Secured a 25% improvement in performance outcomes by critically evaluating and refactoring existing code
- Enhanced workflow efficiency by using Python to automate data parsing and operations on database tables
- Optimized server traffic routing through meticulous configuration of Apache and Nginx settings
- Heightened site and user metrics analysis by presenting comprehensive details in a PHP-based dashboard
- Facilitated community discourse by developing a forum with React, tRPC, Express, and MySQL

Volunteer Software Engineer

February 2017 - Present

The Pokemon Kingdom

Remote, U.S.

- Realized a load time improvement of over 50% by meticulously refining database field indices and SQL queries
- Resolved over 100 bugs including SQL injection vulnerabilities and XSS vectors through strenuous QA testing
- Improved overall performance by 35% through implementing better data structures and algorithms
- Secured more than \$775.00 USD in contributions by hosting strategically planned community events
- Elevated feature enrichment and game balance by collaborating closely with the development team
- Championed the development of several features, addressing architecture and structure, with PHP and TypeScript

PROJECTS

Pokemon Absolute

December 2020 - June 2023

An online Pokemon game with battling, trading, map exploration, and more

- Automated MySQL table creation and insertion of 10,000+ vital data points by developing Python scripts
- Streamlined the development experience by using Docker to encapsulate the application in containers
- Increased developer productivity by 70% by automatically deploying through an optimized deployment pipeline
- Boosted user-to-user communications by over 300% by integrating a chat system in TypeScript with websockets
- Elevated security through the introduction of a permissions system that manages user access to essential features
- Improved community communications by engineering a Discord bot to elevate interactions while off-site
- Empowered the efficient management of critical database information by creating administrative tools
- Developed an intricate combat system with PHP by applying object-oriented programming practices

OPEN SOURCE CONTRIBUTIONS

Destiny Item Manager

- Fixed an issue where some UI elements weren't using the data store by debugging the application during runtime

Ping.gg - MarkerThing

- Fixed an issue where improper Tailwind styling caused excess UI elements to be culled from the viewport