JOHN DE LA GARZA

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SUMMARY

Passionate software developer with extensive experience ranging from microcontrollers to distributed systems. Adept at mastering new technologies, excelling in managing system complexities and utilizing resources cost-effectively. Known for strong communication skills and an intrinsic drive to understand the intricacies of every project undertaken.

WORK EXPERIENCE

Senior Software Engineer | Blackberry, Irvine, CA   *Apr 2019 - Sep 2023*

- Served as the primary contact and maintainer for the core system supporting a security product. Collaborated with a tight-knit team on various tasks including new code development, bug fixes, deployments, sustenance, testing, and operations.

- Acted as the first responder for customer-facing issues, identifying system malfunctions, pinpointing responsibility, and implementing prompt resolutions. This required diagnosing challenges within a complex distributed system and ensuring timely fix deployments.

- Regularly engaged in pair programming with newcomers to guide them in consistent Git usage and to familiarize them with the operation, development, and debugging of various micro-services.

- Employed the asynchronous 'Tornado' Python3 framework for several micro-services, leveraging its capabilities to manage IO-bound core services. Familiar with Asyncio's cooperative yielding approach in Python for efficient IO operations. Supported backend operations with PostgreSQL (RDBMS) and Redis (for caching and pub/sub). Assumed ownership of projects originally developed by other teams in Lua and Go.

- Developed expertise in deployment processes, AWS services, and multi-endpoint debugging. Typical responsibilities spanned addressing critical production issues, feature additions, bug resolution, code reviews, and performance tuning based on rigorous testing.

Senior Software Engineer | Comscore, Portland, OR   *Nov 2016 - Dec 2018*

- Contributed to the development of a distributed system designed to track and analyze ad viewership. The architecture included data retrievers for client downloads, importers for data normalization and storage, an in-house parallel database for extensive data storage, summarizers for data analysis, RDBMS for frontend summary storage, a queuing subsystem, and exporters to relay results to clients.

- Designed modular command-line tools that functioned synergistically as a language, aiding in data interpretation and facilitating the creation of custom reports. These tools were integrated with high-level scripts to enhance their functionality.

- Actively engaged in routine code reviews, fostering team collaboration and ensuring code quality and consistency.

Senior Developer | Idealist.org, Portland, OR   *Jul 2015 - Jul 2016*

- Collaborated with a focused team to develop an HTTPS REST API, designed to integrate seamlessly with a pre-existing model, database, and messaging system. This API facilitated automated job postings from other systems, necessitating a comprehensive analysis of the current codebase to ensure alignment with the existing architecture.

- Played a pivotal role in devising a system enabling customers to post job listings in bulk. This user-friendly platform, accessible via a REST API, allowed users to submit job postings, monitor their status, and more. The system was meticulously documented, consistent, and intuitively designed for ease of discovery.

- Authored shell scripts to establish a chroot-based sandbox, ensuring a consistent and reproducible development environment across individual developer systems.

- Emphasized a collaborative work environment, consistently prioritizing code reviews and often resorting to pair programming for intricate tasks. All projects were executed in efficient two-week sprints.

Operations Engineer | Rally, Washington, DC   *Jun 2014 - Mar 2015*

- Developed a configuration system that utilized HTTP for internal distribution of configuration files stored in a Git repository. Direct pushes to this repository initiated the publication of updated files. This service was adeptly deployed on AWS leveraging Chef.
- Designed an automated program scheduled via a cron job, responsible for fetching XML data, processing it, and subsequently inserting the data into a local database.

Senior Developer | TVplus, Orange, CA   *Aug 2012 - Jan 2014*

- Designed and implemented a robust read/write caching layer with an HTTP REST interface. The system represented remote data through a graph structure, while local data was organized into a set of lazily-loaded trees. The solution was developed using Flask.
- Engineered a system for the daily acquisition of XML data representing TV program schedules for the upcoming two weeks. This system merged the data into a local database, accommodating show removals, additions, and rescheduling. For rescheduled shows, the system intelligently attempted content re-attachment based on predictive matches, flagging any disassociated content instances for manual oversight.
- Developed a specialized service that accepted a video file URL and an editing description. The system was tasked with muting audio segments and overlaying specified video intervals with a black screen before transcoding the output to H.264/AAC. After video processing, a hash was generated and uploaded to an audio matching service, while a separate server request was made for an alternate hash generation. Upon completion, the path to this secondary hash was integrated into an audio matching server. This entire operation was efficiently parallelized, maximizing multi-core processing.
- Set up a development environment using LXC, enabling a single server to simulate multiple systems. This mirrored the production environment distributed across numerous Amazon EC2 instances, offering a realistic development setting.

SKILLS

Programming Languages
Python, Bash, C, SQL, Go, Perl, Lua, Javascript, Lisp, Ruby

Technology
RDBMS (PostgreSQL, MySQL), DNS (BIND, Route53), Terraform, Linux (user and kernel), AWS (Lambda, ASG, ECS, ElasticCache (Redis), Kinesis, Security groups, etc), nginx, OpenBSD, Tornado, Flask, HTTP

Languages
English, Spanish

EDUCATION

California State University, Fullerton
BA Management Information Systems   Dean's List