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Summary

Software Engineer with significant years of experience using a wide array of tools and technologies to plan, design, develop, test, deploy, maintain and support globally distributed internet applications at large and low scale.

Exhibits the ability to take on non-routine projects and learn and integrate new technologies.
Recognized as a team player, dependable, adaptable, reliable, flexible, business-oriented, committed, and compassionate.

SPECIALTIES:
▪# Trust & Safety: building and integrating technical solutions to combat child abuse in media platforms and protect users and employees from harmful content.
▪# Large Scale Systems: billions of digital assets (images and videos) gobbling petabytes of data.
▪# Fintech: Substantial time spent with online billing systems for subscriptions, renewals, shopping carts, US and international taxation, foreign currencies, and billing systems. Integrated several payment providers. Credit card tokenization. Payment improvements (increases ;)) with several levels of grandfathering and complexity.
▪# Integration of 3rd party services like Safer (by Thorn), Intercom, Avalara, Stripe, Amazon Payments, PayPal, and others. Familiar with using/integrating 3rd party services via APIs (REST, SOAP, ...) through thin clients or complete SDKs.
▪# Globalization (g11n): Internationalization (i18n) and Localization (l10n). Foreign currency and taxes.
▪# Backend and Middleware for highly distributed web applications and asynchronous processing.
▪# Solid knowledge of relational and other data stores like NoSQL (DynamoDB) and Graph (Amazon Neptune).
▪# Hands-on experience using AWS serverless services like Lambda, S3, Aurora, DynamoDB, SQS, Simple Notification Service, Elastic Compute, container management, and more at a large scale.
▪# Currently proficient in PHP (modern and old). Enough knowledge of JavaScript to understand what's happening in nodejs apps and some modern frontend. Open to learning new languages if motivated and given the time and resources.
▪# Has been interacting with QA teams on full QA cycles for years. And is familiar with unit, functional, integration testing, and continuous integration and delivery.
▪# Bilingual. He was born and raised immersed in the Spanish language and culture. He has lived in the US for almost half his life and can legally work in the US, the European Union, and Colombia.

Currently working remotely from the Pacific North West in the US, his cats share their house with him, his lovely wife, and teen sons.

Experience

Senior Software Engineer
SmugMug
Mar 2020 - Present (2 years 5 months +)
► Tax Modernization:
As SmugMug grows internationally, not knowing how much tax to charge in a transaction often means you can not defer or split the tax with the buyer, and the company assumes all of it. Adding new

countries or adapting to tax law changes in existing markets currently takes significant time and effort affecting our ability to expand and succeed in new regions. I was part of a small multidisciplinary team tasked with modernizing and improving tax collection throughout our product. (*)

► Price Improvement (increase) on subscriptions and recurring renewals for multiple term plans. Even though I was unable to participate for the entirety of the last price improvement project, I got to spend 2 full weeks working on it and was able to get it to a place where the rest of the team could continue and finish the project on time and successfully.

► Digital assets.
I was part of a small group tasked with proposing a viable and more robust architecture to store and manage billions of media files, starting a new effort where images and videos are abstracted as digital assets composed of metadata (i.e. EXIF, tags/keywords, labels, ratings, groupings, etc..) and related files (JPG, RAW, Sidecar, etc..).

► Fantastic Tax
Part of a team that built and wrapped Avalara's AvaTax API V2 functionality exposing functionality through a familiar and easy-to-use interface into a PHP SDK composer package.

► Video Content Rendering System (VCR)
Part of a small team that rewrote SmugMug's video rendering engine, by optimizing the use of AWS's video rendering providers ETS (Elastic Transcoder) and MediaConvert to save ~$15K in video rendering per month.

Software Engineer
Flickr
Feb 2019 - Jan 2021 (2 years)
► Flickr's Thorn Integration
After being acquired by SmugMug in 2019, I was one of the engineers that lent a hand in accomplishing the impossible task of cutting all ties between Flickr and Yahoo/Oath/Verizon services in ~12 months.

In my temporary role, I was the lead engineer on a project to build a system to handle child abuse-related media (CSAM). We leveraged Safer, a technology developed by Thorn, to scan and detect known CSAM content and report it to NCMEC. We also enhanced and added some moderation capabilities, and developed a system to securely archive the content and share it with the proper authorities.

Sorcerer (Software Engineer)
SmugMug
Aug 2015 - Mar 2020 (4 years 8 months)
After relocating from California to Oregon, I continued to work full-time but remotely:

► Several Price Improvements (increases) throughout the years:
Changing plan prices for new and existing subscribers in our proprietary in-house recurring bill system was challenging. Our billing system uses a Deterministic Finite State Machine to handle all possible states, including expired credit cards, declined transactions, accounts that are suspended or terminated, and reactivated accounts.

► Intercom Integration:
In order to support marketing and product teams in delivering standout onboarding experiences,
I engineered a "feeder system" that allowed for real-time data synchronization of our customers'
information. This enabled marketing and product teams to use accurate data to build quick feedback
loops.

► LPA (Login and Pay With Amazon) integration:
Integrated this new payment provider for subscriptions and renewals. Built to work synchronously, with
an asynchronous fallback process in case of failure.

Sorcerer (Software Engineer)

SmugMug

Feb 2011 - Aug 2015 (4 years 7 months)
Started as a Full Stack Engineer comfortable working with PHP on the backend and JavaScript on the
frontend. Worked on several projects during this time, including:

► Media Picker:
It was around 2014 when SmugMug had a big redesign. The engineer in charge of a big piece of
the frontend left the company, and that's how the "Picker" landed on my plate. It was 90% frontend
(javascript mix of YUI 2 and 3) and the rest backend in PHP. The picker can best be described as a
view where you can see and navigate through thumbnails of images from a particular gallery or folder,
and select them to perform an action. As of June 2022, it remains the way SmugMug's UI allows users
to navigate and pick images from their node structure.

► Buyer & Seller Currency:
The first "big" project I worked on was adding the ability for our visitors around the world to purchase
products not only in USD but in their local currency as well. It was followed by another project to allow
our Pro customers to price their products in their local or any currency. This took adding currency
selectors in every place prices were shown, plus all the financial calculations and storage related to
prices, currencies, and exchange rates. PHP, JavaScript, l10n, i18n

► Packages:
Our packages feature needed some changes. It had a YUI2 frontend and PHP backend talking through
RPC calls.

► Image Positions:
Images in galleries can either be automatically sorted by name or date or manually sorted by an
absolute position inside the gallery. Keeping the manual sort consistent while dragging and dropping
images around was buggy and needed fixing. It was a MySql store with billions of rows and business
logic in PHP.

Technical Yahoo (Senior Software Engineer)

Yahoo

Jul 2009 - Jan 2011 (1 year 7 months)
• Member of the Localization (L10N) platform team. Currently acting as Scrum Master (and active
developer) of a team of several engineers developing and maintaining a scalable and highly available
application using Java/PHP/Perl/DHTML/Oracle in a web service oriented architecture. This platform is
used by ALL Yahoo! Global products.

• Project manager (and developer) in the successful migration of a couple hundred projects from an old localization tool (Perl and MySQL) into the new localization platform. The migration was made in a record time of 10 months exceeding, by far, all expectations.

Technical Yahoo (Software Applications Engineer)
Yahoo

Sep 2005 - Jul 2009 (3 years 11 months)

Member of the Yahoo! I.TT. (International Tiger Team) since its inception until its end. The I.T.T's main purpose was to help teams in enabling their products to be internationalized and localized. Some of the projects I worked on where:

• Helped the Yahoo! Buzz and Yahoo! Maps team in the internationalization and localization of their application making it ready to be simultaneously deployed in multiple markets. Used PHP and JavaScript.

• Collaborated with the "Glue" team developing the next generation of web search. I was in charge of designing, developing and deploying the storage system using MySQL, Memcached and PHP.

• Development of a customer care tool to manage Yahoo! User's core identity (username, aliases, gender, age, location and profile photos). Used PHP, CoreID webservice, JavaScript, YUI libraries.

• Carried out the migration and redesign of Yahoo! News Search for 35 international markets and 18 different languages. Used PHP, PERL and JavaScript.

• In charge of creating a customized Yahoo! Version of Internet Explorer 7 for 40 international markets in 21 different languages. Also implementing the landing pages where users could download it and get support.

• Developed a FireFox plugin that provided a Drag&Drop interface to upload media files using XUL and JavaScript.

• Helped with the Internationalization of Yahoo! 360 and with its deployment in 14 international markets.

Technical Yahoo (Software Applications Engineer)
Yahoo

Nov 2000 - Sep 2005 (4 years 11 months)

• Contributor in the design, redesign and implementation of the following Yahoo! Latin American verticals: News, Sports, Entertainment, Music, Finance, Movies, Autos, Weather, Home Page, Travel, Yahooligans, Buzz Index Tool, Inside Matches, Full Coverage, and few others.

• Worked hand in hand with the marketing and product teams Implementing tens of promo sites, multiple floating ads for the Yahoo Home Pages across Latin America and several content integration deals with AFP, FoxSports and La Vox.

• Software and database (MySQL) analysis and design, XML parsing/generation, programming in PHP, PERL, JavaScript and shell.

• Contributor in the architecture and implementation of the Latin American Business Contingency Plan.

• Supporting and maintaining the Latin American Content Management System.

• System administration of several development, staging and production servers (FreeBSD).

Senior Internet Programmer
Mindsare Design

Nov 1999 - Nov 2000 (1 year 1 month)
• Develop and support the following Internet and Intranet Applications

o Philips Semiconductors. Enhancing a current intranet application that automates the Purchase Requisition System for Computers, Peripherals and other office products.

o Recycling and Composting Program of the County of San Mateo. Analysis, design and development of the RecycleWorks (www.recycleworks.org) Internet application. Application used PERL, HTML and Javascript connecting to a MySQL database. The web server was Apache running on FreeBSD.

o FORTEL. Enhancing the shopping cart on an Internet application for their products visualroute (www.visualroute.com) and visualpulse (www.visualpulse.com). Application used PERL, HTML and Javascript. Stored data in the client using cookies. The web server was Apache running on FreeBSD.

• Member of the PostMaster General development and support team. Maintaining the application and the servers. Support with customers via email and telephone.

• System Administrator for the Hosting Services Department. All servers running FreeBSD.

Founder and Co-owner
Imagine SAS

Jan 1996 - Nov 1999 (3 years 11 months)
• Founder of one of the first Internet companies in Colombia.

• Analysis, design and development of Internet/Intranet applications.

• Sysadmin of web (Apache), email (sendmail, MDaemon) and ftp servers running FreeBSD.

• Analysis, design and development (in Borland's Delphi) of control software to monitor/control access using external devices (card readers, RFID, …).

National Expert
ICBF

Nov 1992 - Dec 1995 (3 years 2 months)
Project manager and a key team member that helped this national government institution modernize its computer infrastructure and information systems.

Education

Universidad Autonoma de Manizales

Systems Enginner , Software

1985 - 1992

Final Project: CASE (Computer Aided Software Engineering) and Prototyping Tool for JSD (Jackson Systems Development) methodology developed in Small Talk V (Pure Object Oriented Programming). It scored the highest grade.

Licenses & Certifications

Serverless and Microservices for AWS - LinkedIn

Skills

Information Technology • Entrepreneurship • Engineering • Software • Technology Start-up • Content Management Systems (CMS) • Internationalization • Large Scale Systems • Currency • Electronic Payments