

## Chuck Chau - Walnut, Los Angeles, CA

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<https://github.com/volkstrader/resume>

Dedicated and versatile software development professional with experience in architecting, planning, coaching, and delivering innovative technology solutions. Demonstrated ability establishing iterative process to set short and long-term IT strategic plan; leading full cycle development to ensure on-time, on-target completion

- Interpreting stakeholders needs into user stories and acceptance criteria
- Giving technical advice to management team
- Hands-on coding architecture framework prototype / solution
- Writing technical documentation and user guides
- Coaching technical staffs on new technologies and processes
- Coordinating internal and external technology resources to realize deliverables

### Core Competencies

- AWS Architecture
- Serverless Design and Implementation
- Microservices / Docker
- IT Strategic Planning
- Continuous Integration (CI) Automation
- Application Lifecycle Management

**Technical Proficiencies** (5:Fluent, 4:Good, 3:OK, 2:Prior Experience, 1:Experimental)

<b>AWS</b>	CloudFormation, S3, Lambda / SAM, Step Functions, ElasticCache, Cognito, AppSync GraphQL, DynamoDB, Aurora, Athena, Glue, SNS, SQS, API Gateway, Kinesis, ECS / Fargate, EC2, RDS, CodePipeline, CodeBuild, CodeDeploy
<b>Programming Frameworks</b>	<b>Go (5)</b> <b>.Net (5)</b> C# (.Net dotnetcore, .Net Standard), Meta-programming, Reflection, Managed Extensibility Framework (MEF), Autofac <b>javascript/TypeScript (4)</b> node.js, RxJs, AngularJS, ReactJS, Data-Driven-Document (D3) UML (4), Python (3), Powershell (3), Bash (3), SQL (4), Salesforce-Apex (2)
<b>Platforms</b>	AWS (4), GCP (2), Docker (4), Linux (3), Windows (5), Git (4), CircleCI (4), Salesforce (3)
<b>Databases</b>	DynamoDb (3), Redis / LUA (4), Aurora / MySQL (3), MS SQL Server (4), ElasticSearch / LogStash / FileBeat (2), PostgreSQL (3)
<b>Services Packages</b>	SVG, Google DoubleClick for Publisher (DFP), Google Analytic (Universal Analytic), Google Tag Manager (GTM), Twilio

### Recent Professional Experiences

#### Lead Backend Software Engineer

Not Ordinary Media, LLC, Los Angeles, CA

#### [AdIntelligence - Brand Optimized Video Solution](#)

AdIntelligence is a new platform replacing Django based MA1, that not only managing Youtube video ads, but also having the capability to integrate with other social platform, such as Facebook and Twitter ... User management and authentication component was replaced by Cognito; Django RESTful API microservice was replaced by AppSync GraphQL API; PostgreSQL RDS was replaced by S3 data lake (Parquet, Glue, Athena), DynamoDB and Serverless Aurora. I was responsible for architecture design and technical management, developer onboarding automation, CloudFormation and CircleCI deployment automation, and code reviews.

#### [MediaAudit 2.0 \(MA2\) - Lambda Serverless Brand Safety Video Solution](#)

Base on the success of API Proxy, the CTO and other developers convinced the potential of the serverless architecture. Hence, reinvent AdWords performance report CSV ingestion workflow to address the django performance limitation, using serverless architecture. The new design decomposed original data ingestion workflow into multiple lambda triggered by

S3 bucket events, SQS, SNS and StepFunction; using S3 and Glue as data lake to store and catalog large amount of AdWords campaign/Youtube video performance data. This solution has significantly reduced the processing time and huge saving in storage cost compare with pure PostgreSQL RDS storage.

#### API Proxy

Serverless service which not only resolved Youtube Data API quota limitation constraining video meta data fetching - daily volume (10K - 500K). The API Proxy solution combines multiple API keys into a single pool, using Redis and LUA script to rotate and throttle key usage. The proxy execution logic was implemented with AWS lambda Go runtime, invoked by SQS, and StepFunctions workflow. The complete solution was packaged with SAM for lambda, and CloudFormation for provisioning VPC and ElasticCache related resources. The solution has solved the physical limitation on API key quota restriction and proved the advantage of serverless architecture.

#### Media Audit (MA1) - Brand Safety Video Solution

Created a new Software Development Lifecycle Process to resolve inconsistent production deployment issue. Documented the new process in Confluence Wiki with topics defining Roles and Duties, Jira Sprint Management, Codebase Workflow Management based on GitFlow - branching and versioning with GitHub, Release Process Management - Jenkins and Teraform automation and team communication. After implementing the new SDLC process, time spent on preparing and releasing new code to multiple environments reduced from day to less than 30 minutes.

### **Principal Software Engineer**

Bitcentral, Inc, Newport Beach, CA

#### FUEL Video Streaming Engine

Developed HLS streaming engine components in Go, powered by AWS ECS Fargate, DynamoDB, and ElasticCache.

#### FUEL Media Processing Framework

Taking the initiative to address the ad processing backlog issue, prototyped a highly scalable solution using SNS, SQS and Step Function; to start a new design discussion. Learned from the prototype, implemented a new processing microservice framework not only comply to business requirement, but also having the goals of highly scalable, efficient, simple and transparent.

#### SpotX Video Ad Integration

Implemented an ad processing pipeline integrated with SpotX Video Ad platform to support ad video delivery to HLS streaming engine. The workflow requests VAST from ad platform API, download the mp4 ad content, convert the video file into Transport Stream - ts files, and then save the ts files to S3.

#### Local Dev Docker Stack

Created docker-compose scripts to containerize FUEL subsystems, which allow running the FUEL eco-system with developing branch code on local dev box.

#### FUEL Analytic Schedule Event Generator

Created serverless Lambda application invoked by CloudWatch schedule event. The Lambda applications can be configured to call the Analytic API or send message to queue listened by Analytic processor.

### **Software Architect / Senior Software Engineer**

ETC Processing Technologies LLC, Los Angeles, CA

#### Client API on AWS API Gateway

Architected a Client API which will allow ETC to pursue new line of security clearing business from online brokers, and integrate their trading platforms with ETC back office; pilot project for exploring AWS cloud platform option

#### Continuous Integration (CI) Implementation

Defined and applied new Application Lifecycle Management process for development team (dev team), using Team Foundation Server 2017 with Git; targeted to fully automated build and deploy of both application and database changes to different environment

IT Strategic Planning / Roadmap

CEO appointed to lead the effort to create IT Strategic Plan / Roadmap process and policy; documentation templates were created in Confluence, ready for 2018 planning

System Architecture Assessment

Documented the current system architecture and proposed a next generation vision, the resulting document was used for FINRA audit and training material for IT onboarding

Tooling Assessment / Recommendation

Identified and recommended new tooling software for Team Communication, Project Management, Application Lifecycle Management, and Development; leading to improving IT workflow and accountability

**Senior Software Engineer****CoStar Group, Ontario, CA**Enterprise Ecommerce Pricing Engine / Service

Designed and implemented an enterprise solution for calculating shopping cart and generating price sheet, with multi-dimensional pricing model, discount schema, historical and future pricing support; leading to reduction in developer time consumed for pricing update from days to minutes

Marketplace Ad Creative Publishing 2.0

Acted in the role of technical lead to refactor ad creative editing workflow, utilized technologies, such as SVG, D3, Akamai, browser canvas; leading to improve overall performance and artifacts portability

Ecommerce tracking using Google Universal Analytics (UA) with Google Tag Manager (GTM).

Designed and implemented an integrated solution to track ecommerce activities on LoopNet.com website using UA with GTM, enabling ecommerce conversion funnel analytic

Marketplace Ad System powered by Google DFP

Designed and implemented an ad platform, integrated with Google DFP, for selling ad spaces on LoopNet.com

Cityfeet.com and Loopnet.com Google Universal Analytic (UA).

Designed and implemented a solution to track user behavior data, such as clicks, social sharing, using Google Universal Analytic (UA)

**Employment History**

<i>Lead Backend Software Engineer</i> , Not Ordinary Media, LLC, Los Angeles, CA	12/2018- Present
<i>Principal Software Engineer</i> , Bitcentral, Inc, Newport Beach, CA	1/2018- 12/2018
<i>Software Architect / Senior Software Engineer</i> , ETC Processing Technologies LLC, Los Angeles, CA	12/2016- 12/2017
<i>Senior Software Engineer</i> , CoStar Group, Ontario, CA	4/2011- 12/2016
Previous employments available upon request	

**Recognitions**

Nominated CoStar Innovation Award	2014
CoSart Developer Conference	
Winner of CosStar Innovation Challenge	2012
CoStar Developer Conference	

**Education**

California State Polytechnic University, Pomona	1998
B.S. Computer Science	