

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)

AWS	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
Programming Frameworks	Go (5) .Net (5) C# (.Net dotnetcore, .Net Standard), Meta-programming, Reflection, Managed Extensibility Framework (MEF), Autofac javascript/TypeScript (4) node.js, RxJs, AngularJS, ReactJS, Data-Driven-Document (D3) UML (4), Python (3), Powershell (3), Bash (3), SQL (4), Salesforce-Apex (2)
Platforms	AWS (4), GCP (2), Docker (4), Linux (3), Windows (5), Git (4), CircleCI (4), Salesforce (3)
Databases	DynamoDb (3), Redis / LUA (4), Aurora / MySQL (3), MS SQL Server (4), ElasticSearch / LogStash / FileBeat (2), PostgreSQL (3)
Services Packages	SVG, Google DoubleClick for Publisher (DFP), Google Analytic (Universal Analytic), Google Tag Manager (GTM), Twilio

Employment History

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

Recent Professional Experiences

Lead Backend Software Engineer

Not Ordinary Media, LLC, Los Angeles, CA

AdIntelligence - Brand Optimized Video Solution

AdIntelligence was a new platform product that not only managing Youtube video ads, but also having the capability to integrate with other social platform, such as Facebook and Twitter ... This project was a complete replacement of Media Audit Django (MA1). 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 project management, developer onboarding automation, CloudFormation and CircleCI CI/CD automation, and code reviews. The project is still under development.

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

Base on the success of API Proxy prototype, the CTO and other developers convinced the potential of the serverless architecture. I was tasked to reinvent Media Audit ingestion workflow to address the django performance limitation. The new design decomposed original data ingestion workflow into multiple lambda, and also made use of S3 and Glue as data lake to store and catalog large amount of AdWords campaign performance data. This solution has significantly reduced the processing time and huge saving in storage cost.

[API Proxy](#)

The company was suffering from Youtube Data API quota limitation, which constrained video meta data consumption at scale. I proposed and prototyped an API Proxy solution which rotate and throttle multiple API keys using Redis and LUA script. The proxy execution logic was implemented with AWS lambda Go runtime, invoked by SQS event, driven by StepFunctions workflow. The complete solution is 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 and proved the advantage of serverless architecture.

[Media Audit \(MA1\) - Brand Safety Video Solution](#)

Media Audit was a Python Django application built by oversea contractors and it was having code merge and deployment complication. I was tasked to create and fully document a new Software Development Lifecycle Process, which covered from defining the Roles and Duties, Jira Sprint Management, Codebase Workflow Management based on GitFlow - branching and versioning with GitHub, Release Process Management - automation and 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)

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	