

Amr F. Desouky, Ph.D.

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SUMMARY

Software Engineer with proven experience developing decentralized software systems utilizing advanced techniques including Microservices, Event Driven Design, Domain Driven Design, and Cloud-based solutions.

EDUCATION

Doctor of Philosophy: Computer Science - University of Alabama, Huntsville - May 2014

Masters of Science: Management Information Systems - Virginia Tech University - May 2009

Baccalaureate of Science: Business Information Technology - Virginia Tech University - May 2006

EXPERIENCE

Independent Contractor | Lead Software Engineer | 06/2018 – Current

- Worked with enterprise clients including Verizon, Google, Mailchimp, College Board to build microservices
- Solely developed official Google Firebase Mailchimp extension featured in Google I/O 2021
- Lead Engineer developing backend nodejs typescript microservices and GraphQL (subgraphs) for micro frontends
- Migrating (lift & shift) College Board LMS architecture from on-premises to AWS
- Developed an order intake process leveraging SNS, SQS, Lambda, and DynamoDB
- Developed backend API to help customers receive wellness info for pets using Microsoft Azure functions for Mars
- 100% code coverage, end-to-end automated tests using cucumber, gherkin, and cypress. Built CI/CD pipelines
- Utilize SNS/SQS/Lambda/Glue/Athena serverless solutions along with CloudFront for CDN edge caching
- Lead all engineering efforts for Zirtue, Inc. from coding, integrations, and development for FinTech app
- Technology stack includes react native app with monorepo backend microservices utilizing event sourcing CQRS
- Responsible for: customer integrations, technical discussions, writing code, engaging in code review, managing releases, interfacing with Product and Design, and defining the engineering roadmap and north stars
- Weekly 1:1s with 12 direct reports. Hired and scaled the engineering team according to demand and budget.

Social Security Administration | Lead Software Engineer | 06/2016 - 06/2018

- Replace 52 Legacy systems with a Nodejs microservices for processing disability claims in the United States
- Implement a message-driven architecture to receive/send events over AMQP MQLite topics
- Utilize React.js for building views via reusable components in conjunction with Flux/MobX data stores
- Utilize ZooKeeper to eliminate race conditions (concurrent intake of transactions) in a distributed environment
- Utilize both an SOA and Microservice architecture for developing node.js modules
- Write unit tests with 100% code coverage to allow for continuous integration and automated builds

Koding Lab | Engineering Lead | 01/2014 – 06/2016

- Develop an educational SaaS platform designed to help students learn how to program through interactive labs
- Successful Alpha release supporting 1000+ active students on a daily basis
- Technology stack comprised of Node.js/Meteor.js, React/Blaze, and MongoDB
- Utilize a Microservices architecture for creating app services
- Implement Elasticsearch, Logstash, and Kibana for logging
- Define a testing approach comprised of Unit Tests, Integration Tests, and automated builds for each Pull Request
- Implement Continuous Integration, Continuous Delivery, and Continuous Deployment on all successful builds

Independent Contractor | 04/2007 – 01/2016

- Develop enterprise systems for U.S. federal government agencies using various technology stacks

TECHNOLOGIES

Typescript, Javascript, Node.js, gRPC, Kafka, GraphQL, React, Couchbase, MongoDB, PostgreSQL, ELK, Docker, API Gateway, ECS, SQS, SNS, RDS, Lambda, Glue, Athena, Nginx, Mocha, Chai, Sinon, Istanbul, Cucumber, Jenkins, Npm, Yarn, Splunk, Datadog, Dynatrace, Swagger, OpenAPI, Kinesis, Github Actions.