Michael **Lane**

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Work Experience

Amazon   *Virtual*
SOFTWARE DEVELOPMENT ENGINEER II   *Sept 2019 - PRESENT*

- Architected a global, highly available, machine learning-enabled web service that supports all internal and outsourced Amazon Customer Service Agents and their managers world-wide
- Used Typescript, React, AWS AppSync, AWS Lambda, and DynamoDB to build highly available, performant, and secure web applications for Customer Service Agents
- Used AWS Cloud Development Kit and Typescript to define our infrastructure as code and leveraged the AWS CodeSuite to build fully automated CI/CD pipelines
- Designed and built an Automated Acceptance Testing service using Typescript, Jest, and Cucumber
- Architected and a highly available clickstream logging and analytics solution using AWS Kinesis Firehose, Kinesis Data Analytics, and AWS Managed Elasticsearch
- Spearheaded my team's effort to push Amazon into the future by making legacy Java services securely available to next generation AWS-based clients
- Used custom extensions to Java Spring to maintain legacy enterprise services

MyVR   *Portland, OR*
SR. SOFTWARE ENGINEER   *Jun 2019 - Sept 2019*

- Use Python, Django, MySQL, Redis, and Vagrant to build backend services for MyVR
- Working through the process of upgrading the tech stack to Ubuntu 18.04, Python 3.7.4, and Django 2.2 from legacy versions
- Upgrading our services to make use of newer JSON APIs instead of outdated XML APIs to better serve MyVR clients
- Designing and building an end-to-end machine learning service using Kubernetes, Docker, and Django for the backend and using ReactJS served as a server side rendered single page app using NextJS deployed to AWS Lambda

Perch Security   *Remote*
SOFTWARE ENGINEER   *Sept. 2018 - May 2019*

- Use Python, Django, Postgres, Redis, and Docker to build and extend the Perch Security web service
- Created a method of allowing videos stored on S3 to be watched on company pages but not downloaded by instituting a clever dual CloudFront distribution with the appropriate CORS settings
- Architecting a data lake and machine learning analysis platform using ELK stack for petabytes of security indicator data
- Use Javascript to create custom modifications to Kibana that is tailored to the needs of security professionals who use Perch

Uncorked Studios   *Portland, OR*
SR. SOFTWARE ENGINEER (SHORT TERM CONTRACT)   *May 2018 - Aug. 2018*

- Used Python, Django, MySQL, and GraphQL to rebuild a web service from the ground up to allow the client to scale by 10X
- Built serverless ETL user clickstream pipeline in Django using AWS Kinesis, Firehose, Glue, Lambda, Athena, and S3 to capture rich user activity data for future Business Analytics

Nextas America   *Washougal, WA*
SOFTWARE ENGINEER   *Jan. 2018 - Jun. 2018*

- Used Python, Keras, GPU-accelerated Tensorflow, and C++ to R&D deep learning approaches that replace legacy computer vision tasks with algorithms that are faster, more robust, and far more accurate
- Used Python and Keras to build a proof-of-concept deep neural network based on current research to generate a depth map of sub-millimeter scal objects from a pair of stereo images

Portland State University   *Portland, OR*
GRADUATE TEACHING ASSISTANT   *Sept. 2016 - Jun. 2017*

- Instructed students on machine learning topics such as neural networks, Bayesian networks, reinforcement learning, support vector machines, ensemble learning, unsupervised learning, and classifier evaluation
- Provided instructions and guidance to students implementing a term-long project to build a user-level threading library using C and Assembly

CDK Global   *Portland, OR*
SOFTWARE ENGINEER INTERN   *Jun. 2016 - Aug. 2016*

- Developed REST API service using Python, Flask, and Cassandra that supports 40,000 phones making hundreds of thousands of simultaneous connections
- Built system using Machine Learning to allow 3 Raspberry Pi receivers to track the locations of 6 BLE beacons to an accuracy of within 6 meters

Acquia *Portland, OR*

Software Engineer Intern *Jun. 2015 - Jun. 2016*

- Fixed bugs and improved functionality of a Remote Administration script using PHP, Bash, and Drupal Shell (Drush)
- Created an automated task scheduler using PHP, SQLite, and Drush that reduced time required for manual tasks by 80% and reduced the hands-on time spent running a weekly mass update task from 3 hours to 5 minutes

SmugMug *Remote*

UI/UX Designer and Developer *Apr. 2007 - Apr. 2009*

- Customized SmugMug sites using HTML and CSS for important customers such Marc Meunch and partners such as Philips and Nintendo
- Programmed help pages using PHP, HTML and CSS to document and explain site updates for end users

US Air Force *Ft. Lewis, WA*

Air Mobility Liaison Officer *Nov. 2003 - Jun. 2006*

- Worked with US Transportation Command to coordinate major US Air Force airlift operations in support of US Army operations for peacetime and wartime missions
- Planned and led wartime replacement operations of one 3,000+-soldier brigade with another in Mosul, Iraq
- Developed a plan in Iraq to establish flight operations at a remote air base resulting in a reduced number of deadly convoys

US Air Force *McConnell AFB, KS*

Evaluator Navigator *Nov. 2000 - Oct. 2003*

- Planned and executed high priority air-to-air refueling missions worldwide
- Instructed and evaluated KC-135 navigators to ensure they could complete missions safely and effectively
- Conducted nearly 100 air refueling missions over Afghanistan between October 2001 to March 2003
- Executed over 100 air refueling missions over Iraq between March 2003 and May 2003

Education

Portland State University *Portland, OR*

M.S. Computer Science *Jun. 2014 - Jun. 2017*

- Emphasis in Artificial Intelligence and Machine Learning

University of Phoenix *Online*

M.S. Computer Information Systems *Oct. 2002 - Apr. 2005*

Illinois Institute of Technology *Chicago, IL*

B.S. Mathematics *Aug. 1994 - May 1998*

Extracurricular Activity

Librar.io *Camas, WA*

Architect *Jan. 2019 - PRESENT*

- Librar.io is a personal lending library management application for teachers
- Integrating with Skyward in order to allow the application to tightly integrate with their existing student management system
- Creating a serverless GraphQL backend using Typescript, AWS AppSync, and DynamoDB
- Creating a JAM stack front end using Svelte.js and Sapper, both using Typescript
- Using AWS CDK to describe the infrastructure as code and CircleCI for continuous integration and continuous deployment

Scorecerer *Camas, WA*

Architect *Feb. 2019 - PRESENT*

- Using AWS Alexa Skills Kit, AWS Lambda, and DynamoDB to build Alexa Skill to assist with playing board games