Michael **Lane**

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Work Experience

ChowNow
Remote from Camas, WA

Sr. Backend Engineer
May 2022 - Dec 2022

- Architected a new microservice that allows ChowNow to integrate with Toast, a major Point of Sale provider for restaurants, using API Gateway, AWS Lambda, and DynamoDB
- Used Python and Terraform to build out our new highly available, scalable, and inexpensive service on AWS which can serve 10,000 restaurants and 100,000+ diner orders per day
- Mentored junior engineers on software best practices such as static and run time type checking, test automation, architecting for scale, and designing systems that are flexible and easy to change
- Worked directly with stakeholders at Toast to demonstrate our integration for certification

Amazon
Remote from Camas, WA

Software Development Engineer ll
July 2021 - May 2022

- Used Typescript to build a new GraphQL service that allows specialized customer service agents to alert abuse prevention teams of abusive customers
- Used Java to build out a highly available and scalable service that allows the customer service message bot to grant concessions to send customers to a specialized customer service agents for further verification based on machine learning predictions

App Annie
Remote from Camas, WA

Sr. Backend Engineer
Jan 2021 - July 2021

- Used Python, Flask, and Postgres to build an machine learning-enabled service to provide users with relevant insights into the performance of their app on several metrics compared with their competitors
- Used Pytest to create a new testing framework that increased our test coverage from 85% to 95% while reducing the lines of code by 15%
- Architected a scalable and performant Unified Feed to replace App Annie's home page which combines data from many existing sources into a feed that prioritizes items based on our user preferences and activity
- Architected a system whereby new internal data sources as well as data from future external sources (from partners, news sources, blogs, etc) can be quickly added into the Unified Feed system on the home page

Amazon
Remote from Camas, WA

Software Development Engineer ll
Sept 2019 - Jan 2021

- 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 CDK and Typescript to define our infrastructure as code and leveraged 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

Perch Security
Remote from Camas, WA

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

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