Caroline Lily Yu

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EDUCATION

University of Massachusetts, Amherst — Current GPA: 3.3

Bachelor of Science, Computer Science — **Graduation:** 5/10/2018

Courses: Machine Learning, Web Programming, Practice and Applications of Data Management, Advanced Applied Linear Algebra, Interactive Learning Agents for Games, Software Engineering, Artificial Intelligence, Robotics, Computer Graphics, Mobile Health Sensing and Monitoring, JavaScript Game Development, Algorithms

PROFESSIONAL SKILLS

- Ruby, Rails, Python, GoLang, Java, NodeJS, JavaScript, HTML, CSS, SQL, ImpactJS, ReactJS, C/C#/C++
- *Frameworks*: Django, Grafana, Functions
- *Database*: MySQL, Google BigQuery, Oracle Database (18c/19c/Autonomous), MongoDB, Postgres
- *Cloud*: AWS, EC2, SQS, S3, GCP, Oracle Cloud, Serverless Computing
- *DevOps*: CloudFormation, Terraform, Maven, Artifactory, Kubernetes, Docker, JIRA, Packer, Jenkins, CI/CD
- *Web Servers*: Gunicorn, Nginx, Apache
- *Software*: Bitbucket, GitHub, Android Studio, OpenGL, VMWare, PyTorch, ROS, Tensorflow, Unity
- *Other*: GraphQL, SignalFx, Game Development, Agile

CERTIFICATIONS / AWARDS

Amazon Web Services Certified Developer - Associate Certificate — Certification Achieved: **7/31/17**

Validate at: *http://aws.amazon.com/verification* — *Verification code:* T3981XBCK1R110GS

Oracle Cloud Infrastructure Certified Architect Associate — Certification Achieved: **12/20/18**

Validate at: *https://www.youracclaim.com/badges/40dc5d7c-51ad-4682-9df4-34fd03fe28a9/public_url*

Oracle Solution Hub Collaboration Award — Award Achieved: **7/10/18**

TECHNICAL EXPERIENCE

Unity, Cambridge MA — **9/2021 – 12/2022**

Software Engineer II – Measurement

- Architected and coded a secure way for our tracking partners to send postbacks to some endpoints and APIs using **asymmetric** keys using **Ruby on Rails**. Worked closely with the security team and PMs to create an in-depth white paper for our tracking partners.
- Added a feature called Multi Reward Cost Per Action to our main offerwall product, which allowed users to complete and track multiple different tasks in order to gain rewards
- Refactored outdated code to follow a more Object Oriented Programming approach for our attribution conversion flow
- Responsible for attribution, conversion flow, and tracking using **Google BigQuery, GraphQL, Ruby on Rails**
- Onboarded Measurement team to **Honeycomb** logging and made **SignalFx** alerts
- Made frontend and backend changes on the offer details page for our internal testing platform
- Created a productivity management tool for the company-held Hackathon using **HTML5** and **CSS**.

Oracle Corp., Burlington MA — **8/2018 – 9/2021**

Software Engineer II – Cybersecurity/Cloud/Backend — **2/2020-9/2021**

- Developed API's and **unit tests** for our control and data plane in **Java** for multiple use cases.
- Programmed in an **Agile** environment using **Go** code that sends and reads scan data from our queue.
- Wrote **Terraform** to deploy our infrastructure code and was also part of the **DevOps** Platform team

- Onboarded and wrote the **Java** code for our **end-user tests** that run every 10 minutes from our customer/service enclave.
- Wrote part of the **SQL** database code for our objects from our data plane.
- Developed multiple metrics, alarms, **Grafana** dashboards, runbooks and logs for our application's health and took active part in our 24/7 hour on-call rotation.
- Took part in the architecture design of two security projects.

Solution Engineer – App Dev/IaaS **8/2018-2/2020**

- Coded 10,000 Monkeys, a full-stack web-app that uses **Kubernetes**, Oracle's **server-less** platform, Functions, **Oracle Rest Database Services**, **SQL**, **Python**, **Vue.JS**, and **Docker** to simulate enterprise workloads and thousands of virtual users making transactions on Oracle's Autonomous Database**.**
    - Served as team lead
    - Gave an external facing **Tech Talk**, which is available at https://go.oracle.com/LP=83826
    - Demonstrated application to customers nationally in Canada and USA
- Programmed backend in **Python** for Reverse Engineering, a tool used to collect info of all cloud resources on a cloud account and generate **Terraform**, so you can provision cloud resources in different account.
    - Served as co-team lead for the backend team
    - Demonstrated to Enterprise Cloud Architects
- Developed a full-stack prototype web-app connecting to Oracle's Autonomous Database for a customer, Recycling Council of Ontario; the app was written in **Django** and hosted on a **Compute** instance.
- Wrote custom **Terraform** scripts and gave technical workshops for customers, such as PepsiCo, PwC, etc.
- Architected disaster recovery solution and helped perform an "on-premise to cloud" migration for Horizon, using **VMWare** to move their Exchange SQL servers to the cloud**.**
- Contributed to write open source OCI **API** library for cloud native language **Ballerina** with Ballerina **Docker** containerization for Oracle's open-source server-less platform, Fn project.

Hewlett Packard Enterprise/Cloud Technology Partners, Boston MA **5/2016-8/2017**

Software Engineer Intern

- Automated infrastructure as code for contractor company in Ukraine with **CloudFormation** and **Docker** to provision a fault tolerant solution to run **Jenkins** server and have data persist on an Elastic File System.
- Used **Terraform**, **Packer**, and **Chef** to bake an AMI and create an auto scaling group and EC2 Container Service environment to transfer data.
- Used **NodeJS** and **ReactJS** to create an on-boarding web application implementing Microsoft Azure API, Google API, JoinMe API, Confluence API, and Slack API.
- Programmed and designed 3 **Google Apps scripts** for Operations Team.
- Wrote tests with **Selenium** and **CI** platform**, Jenkins,** to test multi-browsers for AppVista.
- Served as head of company's IT Technician/Department and personally assisted CEO.

Undergraduate Research: Autonomous Mobile Robotics Lab, Amherst MA **9/2017-1/2018**

Undergraduate Researcher

- Assisted in Joydeep Biswas' machine learning research, Interactive Learning Agents for Games. Program plays a game of Tic Tac Toe using Minimax algorithm.
- Used **QT/C++** to make a GUI to allow user to draw X's and O's.
- Used **ZeroMQ** to communicate between PyTorch and C++.
- Used **PyTorch** to train and test on custom dataset and create models to image detect a "X" or "O" using linear regression model.

UMass Amherst IT User Services, Amherst MA. **1/2015-4/2016**

Repair/Student IT Consultant

- Awarded "Employee of the Semester"
- Repaired and troubleshot laptops, desktops, and other devices.
- Wrote articles on IT blog, "TechBytes" and worked on "MSP Project", involving imaging/encrypting.