

Tyrone Wu

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EDUCATION

North Carolina State University - Raleigh, NC GPA: 4.0
Master of Computer Science August 2022 - May 2023
Bachelor of Science in Computer Science, Minor in Statistics August 2018 - May 2022

WORK EXPERIENCE

Teaching Assistant - North Carolina State University September 2021 - December 2021
TA for CSC 422/522 Automated Learning & Data Analysis

- Generated importable rubric templates/groups on Gradescope for assignments.
- Exported assignment evaluations with appropriate field mappings to support direct imports onto Moodle.
- Provided iterative feedback for final research projects on problem statement, methodology, method approach, experimental design rationale and analysis, and experiment results.

Software Engineer Intern - nCino, Inc. July 2020 - August 2020

- Created a Salesforce component that expands object details in response to user input to support granular display of custom retail information.
- Wrote Apex unit tests with at least 90% code coverage to ensure that business logic and error handling are covered.
- Helped develop an XML DOM parser that automates field mappings and relationships for custom objects on the nCino data model using XPath and a custom internal library.

PROJECTS

Scientific Crowd Review Application (Sponsored by Oracle): Created a Stack Exchange-like web application for research publications/articles for the research community to open the traditional peer-review process to a crowd-review process, using Next.js, React, Micronaut, Oracle DB, and Oracle Cloud Infrastructure.

K8s Cluster Inventory Deployment: Automated the deployment for a provided microservice that hosts an inventory web app on a self-managed, Kubernetes cluster on AWS EC2 instances. Additionally, configured the built-in Kubernetes dashboard to provide observability on the nodes and pods. Finally, utilized Locust.io to simulate traffic to verify horizontal scaling in the Horizontal Pod Autoscaler resource. Built using Docker, AWS EC2, Terraform, Ansible, Kubernetes, microk8s, and Locust.io.

Deployment & Monitoring Pipeline Tool: Implemented an automated build, test, deploy, and monitor pipeline for 3 different open source applications on an Ubuntu 20.04 image using VirtualBox to host the VMs, [bakerx](#) to provision the VMs and execute setup bash script, and Ansible to execute the build, test, and deployment tasks.

SKILLS

Languages	Java, Python, C++, TypeScript, Javascript, SQL, Bash/Shell
Frameworks/Libs	Micronaut, Spring Boot, React, Next.js, Chakra UI
Tools	AWS, Oracle Cloud, Git, Postman, Gradle, Ansible, Docker, Terraform, VirtualBox, Kubernetes, Minikube, MySQL, MongoDB, Node.js, Unix/Linux, Postman, Locust.io, Figma
Concepts	Data Structures, Algorithms, Database Management, DevOps, REST APIs, Agile Development, Object-Oriented Programming, Data Mining, Data Wrangling, Microservice Architecture, Infrastructure as Code, Full Stack Development, Containerization, Orchestration

EXTRACURRICULARS

Hack_NCState Hackathon 2023 (Award Winner): Developed a stock market simulator that allows users to experience stock investment without risk of losing actual money, using Golang, Gin, MongoDB Atlas, Python, React, and Yahoo Finance API.

HackNC Hackathon 2022 (Award Winner): Developed a web application that centralizes a user's personal finance information with a customizable interface, using HTML, CSS, Typescript, React, Python, Flask, and SQLite.

Advent of Code: Golang for 2015, Rust for 2022.