

Nathanael Garza

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Work Experience

Software Engineer *Genpact*

April 2023 - Present

- Responsible for feature planning, story creation, pull request reviews and led retrospectives
- Led the design of a new single SPA application that manages car dealership database configurations which was shown at NADA 2024 using React, and AG Grid, and Spring boot

Associate Software Engineer *CDK Global*

March 2022 - April 2023

- Modernized ETL workflows to use various AWS services reducing automotive dealership onboarding times by several months and costs by ~\$2 million annually
- Removed the need for software engineers to setup and manage dealership databases by developing a no-code ReactJS web interface for nontechnical domain experts using Javascript and JSON schema
- Developed custom AWS Glue Python scripts for converting and migrating dealership data
- Configured custom CICD pipelines for updating AWS ETL scripts using GitHub Actions
- Created a Spring microservice for running the ETL workflows using Java AWS SDK
- Prevented the disruption of critical dealership onboarding systems by patching SQL injection vulnerabilities in dozens of our legacy PHP and Perl applications

Software Engineer Intern *CDK Global*

Jun 2020 - Aug 2021

- Improved Kubernetes cluster management by centralizing all AWS EKS container metadata within a NodeJS microservice using TypeScript, PostgreSQL, Jest, and Swagger
- Retrofitted a command line program that established CICD pipelines for onboarding programs onto Kubernetes clusters to work as a NodeJS RESTful API
- Reduced cluster onboarding times from hours to seconds by programmatically altering code repository settings using the Stash/Bitbucket API
- Enabled company executives to track modernization progress by building a microservice that saves Bamboo, Jira, and Stash developer data into AWS RDS PostgreSQL database

Education

San Jose State University *Bachelor of Science in Software Engineering*

Dec 2021

Clubs

Controls Lead *SJSU Robotics*

Aug 2019 - Present

- Spearheaded new software team by onboarding 18 new recruits to build a Mars rover for URC 2023
- Built React interfaces that use serial over USB and multiple joystick controllers for controlling rover
- Enforced best practices like TDD, CICD, code reviews, and style guides in C/C++

Projects

CruzeHacks 2023 *Smart Clamp* | [Devpost](#)

Best Health Hack Winner

- Weight collar that automatically records workout data and places them in a workout leaderboard

DavisHacks 2022 *Clever Pedal* | [Devpost](#)

Most Technically Challenging Hack Winner

- Bicycle that detects oncoming cars and notifies authorities in case of emergency

CruzHacks 2022 *Smart Flask* | [Devpost](#)

Best Health Hack, Hardware Hack, & QB3 Sponsor Winner

- Smart bottle that tracks water consumption and ranks users against each other

SCEHacks 2021 *Gone with the Fire* | [Devpost](#)

1st Overall & Best Use of Azure Winner

- Smoke detection system capable of detecting wildfires deep in the forest

Senior Project *Smart Gardening* | [GitHub](#)

Feb 2021 - Nov 2021

- Gardening system that records data, takes pictures, automates watering, and provides plant info

Skills

Languages: C/C++, TypeScript, JavaScript, Java, Python

Databases: MySQL, PostgreSQL, DynamoDB, S3

Technologies: Docker, Git, GitHub Actions, HTML, CSS, Unix, SQL, NoSQL, REST