

# Roger Xu

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## Professional Experience

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**Arrowhead General Insurance Agency, Automation Engineer**

03/2022 – 09/2022

San Diego

- Ensured company services are running as intended by implementing automation tests using Selenium with C#.
- Made sure all insurance forms and documents are generated correctly by using bitmap image comparison and regex extractors.
- Updated old automations for new company website after it was migrated to a new service provider.

## Education

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**University of California San Diego, Computer Science, B.S.**

09/2017 – 06/2021

## Certificates

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Machine Learning Engineering Bootcamp [↗](#)

## Skills

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|--------|--------------|---------------------|-----------------------|
| - Java | - C/C++      | - Python            | - SQL/NoSQL           |
| - Git  | - Unix/Linux | - Assembly Language | - HTML/CSS/Javascript |

## Projects

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### Deep Learning image super resolution

- Trained a machine learning model that uses super resolution convolutional neural network to increase the quality of images on GCP. Deployed as a Flask app, wrangled and processed image data with machine learning tools such as Torchvision and OpenCV.

### Job-Application Tracker Web App

- Created a Java Spring Boot web app that allows users to manage their job applications and perform various CRUD operations. Used Java Spring integrated with MongoDB for backend, frontend is done mostly with Thymeleaf and HTMX.

### Virtual Machine

- Built a virtual machine written in C that can run assembly language programs and simulates a LC-3 architecture computer.

### OpenGL game/animations

- Created a computer graphics game engine demo similar to the game Among Us in OpenGL in C++. Rendered 3D models in different shading/lighting and materials, and added functionalities such as collision detection and basic user interactions.