

Nathan Tran

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EDUCATION

California State University, Fullerton
Bachelor's of Science in Computer Science

Fullerton, CA
Graduated December 2021

WORK EXPERIENCE

Software Engineer
Telesair

June 2022 - November 2023
Irvine, CA

- Developed automated testing framework using **Python** and **C/C++** to interface with medical devices through **UDP** and Ethernet, resulting in FDA approval to sell on the US market
- Independently set up a CI/CD **Jenkins** pipeline with **Docker**, automating building, testing, and deployments while reducing build times by 60%
- Implemented GUI for medical device in **C/C++** with the Azure RTOS GUIX Studio framework and maintained it based on clinician feedback
- Designed the back-end of an Android app that commands the controllers of a medical device through **UDP** and Ethernet, using **Kotlin**'s Jetpack Compose framework
- Collaborated with manufacturing department to create a user-facing device serialization tool with Flask and React, speeding up their production process and eliminating human error by 90%
- Performed root cause analyses of any automated test failures to resolve bugs while reporting and tracking them on **Jira**
- Conducted software verification and validation testing on ventilators to ensure satisfaction of PRD standards on Jama

PROJECTS

Cloud CI/CD Portfolio Website | *AWS S3, CloudFront, DynamoDB, Lambda, Terraform, GitHub Actions*

- Deployed serverless website hosted in AWS S3 Bucket, visit at ntransw.com
- Integrated CloudFront CDN for HTTPS encryption and greater worldwide performance through caching
- Streamlined website updates to trigger on new commits with CI/CD pipeline using GitHub Actions
- Implemented website visit counter using DynamoDB, Lambda with Boto3, and API Gateway
- Increased traceability and simplified maintenance of cloud infrastructure through Terraform

Shamir's Secret Sharing File Server | *C#, .NET, Git*

- Leveraged Shamir's Secret Sharing algorithm to split a file into smaller encrypted file fragments, or recombine fragments into the original file as needed
- Integrated file splitting with automatic uploads to a discord server using the Discord.Net API, bypassing Discord's file size limits and resulting in infinite storage
- Developed feature that allows user to transmit different file fragments across multiple separate channels, exponentially reducing odds of attacker interception

TECHNICAL SKILLS

Languages: Python, C, C++, C#, Bash, YAML, Kotlin

Frameworks: Pytest, Azure RTOS, Jetpack Compose, .NET, React

Developer Tools: Git, Jira, Docker, Jenkins, AWS, GitHub Actions, Terraform, Visual Studio Code