

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 automation framework using **Python** and **C/C++** to command a medical device through **UDP/IP**, resulting in a 90% reduction of manual QA and a drastically faster FDA approval
- Led the design of automated test coverage for a medical device using **Python** and **Pytest**, collecting tons of performance data and proving its reliability in satisfying specs and requirements
- Independently configured a CI/CD **Jenkins** pipeline with **Docker**, streamlining building, testing, and deployments to multiple medical devices simultaneously while cutting build times by 60%
- Implemented embedded GUI for a medical device in **C/C++** with the Azure RTOS GUIX Studio framework and maintained it based on clinician feedback
- Performed root cause analyses of any automated test failures to fix several bugs while reporting and tracking them on **Jira**
- Provided mentorship and technical documentation to other juniors/interns for my automation framework, test coverage, and CI/CD pipeline

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
- Automated front-end updates to trigger on 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, and set up a second CI/CD pipeline for back-end code changes

Shamir's Secret Sharing File Server | *Go, 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 discordgo 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++, Shell Scripting, Go, C#, Kotlin

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

Developer Tools: Git, Jira, Docker, Jenkins, AWS, Terraform, GitHub Actions, Linux Environment

Other: Agile SDLC methodologies, DevOps practices