

Richard Tsai

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Experience

Cloud Application Developer

07/2022 – Current

IBM

- Spearheaded full-stack development efforts in a project with Gatsby, Apollo Client for GraphQL, Java Spring Boot and Jahia CMS
- Created frontend components for modern feel, fetching data from Jahia CMS
- Developed custom API resolver to combine disparate API from existing legacy REST API and newly created GraphQL endpoints
- Orchestrated Azure App Service deployments for multiple customer-facing databases, streamlining management through automation
- Implemented centralized authentication system utilizing business logic-driven JWT tokenization for secure user login and API access control
- Optimized website performance by 20% via configuration of Azure CDN caching, compression and content acceleration techniques
- Reduced manual development environment setup time by over 50% by implementing Docker containers and Bash scripting automation
- Designed & implemented automated CI/CD pipelines using Jenkins, integrating Terraform Secrets Manager for secure data management
- Achieved 25% speedup in Gatsby build time & website performance by reusing Gatsby cache within CD pipelines & optimizing business logic

Helpdesk Consultant

07/2019 – 05/2022

Rensselaer Polytechnic Institute

- Responded to 500+ technical incidents within campus network, resolved 90% of issues on first contact
- Created batch files and scripts to troubleshoot common problems, such as network connectivity and software updates
- Utilized Zendesk API for automating repetitive tasks and resolving common problems
- Implemented knowledge base system, resulting in a 50% reduction in repeat calls due to similar technical issues
- Mentored new hires by training them on software applications, hardware devices, and ticketing system

Cybersecurity Defensive Operations Programming Intern

05/2021 – 08/2021

The MITRE Corporation

- Contributed as a full-stack developer in IDS/IPS in-house project with PostgreSQL and Redis, Python Flask, and VueJS
- Utilized Jira for task tracking, assignments, and collaboration with team members
- Developed custom API calls that fetched data on over 50,000 known vulnerabilities from database
- Increased code coverage by 30% through testing using pytest framework, resulting in more reliable, accurate API endpoints
- Contributed to sprint planning, daily stand-ups, and retrospectives with team members to ensure effective project management

Cybersecurity Defensive Operations Intern

06/2020 – 08/2020

The MITRE Corporation

- Analyzed network PCAP files and host-based log data using Zeek and ELK stack dashboard for insights
- Automated 90% of Zeek script execution using master bash script, reducing manual effort by 75%
- Monitored and managed a web crawling application utilizing in-house Python library packages
- Implemented custom website admin dashboard using AngularJS framework, resulting in a 40% reduction in reporting time
- Presented findings and insights to senior cybersecurity team members through bi-weekly meetings, contributed to project planning discussions

Education | Certifications

Rensselaer Polytechnic Institute

07/2018 – 05/2022

Bachelor of Science in Computer Science

CompTIA Security+: SY0-501

08/2019 – 08/2028

AWS Certified Security - Specialty: SCS-C02

11/2023 – 11/2026

Personal Projects

YACS – Open-Source Schedule Management @ RPI RCOS

Yet Another Course Scheduler – an open-source project to help students plan out their semester

- Led a full-stack project utilizing PostgreSQL, Python FastAPI, and VueJS, containerized with Docker
- Conducted weekly meetings for sprint planning, daily stand-ups, code reviews & ensured efficient collaboration among team members
- Implemented NGINX best practices to enhance security and maintain optimal performance. Conducted CI testing.
- Automated in-house data migration with shell scripts for PostgreSQL tables, ensuring table-upgradability and futureproofing
- Developed custom-built CI/CD pipelines using GitHub Actions and deployment staging and production environments via Kubernetes
- Enhanced security on staging servers on OCI, AWS, and on-premises production servers using Terraform

Lil Mo

Another Discord Bot – a music bot in Discord voice channels and more

- Developed in Java reactive using Discord4J, Lavaplayer & Spotify Web API, containerized with Docker, with maven
- Implemented asynchronous programming to handle concurrent user requests
- Configured automated CI/CD with GitHub Workflows & Secrets to bring updated commits from main branch to on-premises Raspberry Pi Server
- Achieved a test coverage of 90% using Junit tests to ensure accuracy of main features for future commits
- Setup code scanning for code vulnerabilities with GitHub Code Scanning, addressing security risks & ensuring secure development environment

Skills

Languages: Java, Python, C, C++, SQL, Bash, Node.JS frameworks, Typescript

Platforms: Windows, macOS, Linux, Kali Linux, AWS, Azure, GCP, Docker, Kubernetes, GitHub, GitLab, BitBucket, Terraform

Tools: JetBrains IDEs, VSCode, Git, Maven, Gradle, Terraform, OpenShift, Snyk