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SUMMARY

Ms. Zhuang brings over 5 years of experience as a Project Engineer, specializing in systems integration and test of fare collection devices. She has extensive experience in managing the setup, configuration, and operation of fare collection systems, ensuring seamless integration with existing infrastructure.

Ms. Zhuang is proficient in interfacing with front-end and back-end software developers, third-party vendors, and regularly leads customer-witnessed workshops to demonstrate the end-to-end capabilities of fare collection and payment systems. She also delivers production software releases for critical firmware components, including key management and physical security features, and oversees the integration of new subsystems into legacy solutions.

Not only is Ms. Zhuang proficient in writing and optimizing SQL queries to retrieve, manipulate, and manage data from relational databases but she is also skilled in working with Linux and Unix-based operating systems. She is an expert in HTML for creating web page structures and CSS for styling and layout. Ms. Zhuang is also experienced in using Postman for API testing, debugging, and documentation to provide comprehensive evaluations of open architecture solutions for transit agencies.

PROJECT EXPERIENCE

2024 – 2025

MBTA AFC 2.0 Responsibilities

Ms. Zhuang led the Fare Vending Machines (FVM) workstream for MBTA, overseeing defect monitoring and resolution through direct collaboration with the vendor. She conducted hands-on testing of FVMs to confirm the effectiveness of updates, ensuring reliable operation across multiple software iterations. She also evaluated test plans, approving test cases that aligned with MBTA project timelines and requirements.

Ms. Zhuang supported the Interactive Voice Response (IVR) system through extensive testing of its features, including account inquiries and payment options, to ensure accessibility for all riders. She pinpointed environment-specific issues and facilitated resolutions with the vendor, enhancing the IVR's usability for diverse groups of travelers. She worked alongside Clevor consultants to explore a range of customer interactions, refining the system in hopes of exceeding user expectations.

Ms. Zhuang contributed to Key Performance Indicator (KPI) initiatives by assessing device performance metrics, such as availability rates, hardware failure frequencies, and maintenance work order durations. She developed formulas and scripts to consolidate and visualize KPI data, enabling stakeholders to make informed decisions on monthly KPI health. She also partnered with Clevor consultants to improve review processes, streamlining monthly KPI analyses.

2024 – 2025

MTA Purple Line Responsibilities

Ms. Zhuang contributed to the MTA Purple Line project by participating in the Preliminary and Intermediate Design Review phases, where she evaluated key documents, including the Concept of Operations (ConOps), system interfaces, and hardware specifications. She provided actionable feedback to enhance document clarity and readability, ensuring alignment with MTA's project requirements. Her primary focus was on the large-scale upgrade project centered on the validation

	system and ticket vending machine system, where she collaborated with the Clevor team to meet MTA's fare collection goals. She also played a role in solutions architecture for back-office functionalities, focusing on device health monitoring, networking infrastructure, and third-party integrations.
2024 – 2025	TTC PRESTO Transition Responsibilities Ms. Zhuang supported the TTC PRESTO Transition project, which involved a comprehensive system upgrade including integration of new devices while retaining select legacy hardware components. She engaged in the design review process for a range of fare collection components, including transaction processors, point-of-sale devices, inspection devices, mobile fare payment application, fare vending machines, and faregates. She provided detailed input to ensure the upgraded system maintains compatibility with existing infrastructure while meeting TTC's modernized fare payment standards, facilitating a smooth transition for riders.
2022 – 2024	CTA Ventra3 Responsibilities Ms. Zhuang trained Test Engineers on proper test procedures covering the functionalities of validators and ticket vending machines. She led test case reviews, approving test plans and finalizing submittals to the customer for formal approval. Ms. Zhuang coordinated with the Maintenance and Operations team to establish improved automated monitoring rules for various device types. She also oversaw asset management and organization of all test devices in ServiceNow and Back Office applications. Ms. Zhuang worked with Software Engineers to determine the most optimized design for the CAD/AVL bus validator system. The solution incorporated multiple fallbacks in event of connectivity issues, including GPS-based location extrapolation performed by offline-capable microservices. She experimented hands-on with deployment configurations to boost performance and efficiency of the completed features.
2020 – 2022	MBTA AFC 2.0 Responsibilities Sherry led test demonstrations for Cubic, witnessing test cases for the MBTA to ensure strict compliance with requirements and ensuring that functional requirements are thoroughly addressed, and overall test coverage is sufficient. She also conducted field testing by utilizing system test packages and ad hoc scenarios.
2020 – 2022	MBTA Interoperability Responsibilities Sherry adeptly facilitated joint integration testing with MBTA, Cubic, and S&B in the MBTA Model Office. She diligently captured and triaged all defects, ensuring that the relevant contractor receives the necessary information to resolve each issue. Sherry also tracked test coverage and results from all parties to determine production readiness.

WORK HISTORY

2024 – Present	Consultant, Clevor Consulting Group, Portland, OR Ms. Zhuang was hired by CCG in 2024 to enhance the technical team at Clevor Consulting Group. She has been supporting various projects in different capacities such as system integration, environmental configurations, requirements development, testing, and more. Her experience in employing various testing methodologies to validate payment processing devices carries great value in supporting the agencies we work with.
2022 – 2024	Project Engineer, Cubic Transportation Systems, San Diego, CA Ms. Zhuang established and managed proper setup and environmental configurations of over 50 individual functional devices, facilitating engineering development and QA verification in a collaborative lab setting. She also interfaced with front/back-end software developers and third-party

vendors to determine most efficient solutions, addressing the issues identified through defect triages, customer feedback, and gap analyses. As a participant in customer-witnessed demonstrations of the system’s end-to-end operation, she supported business development and the procurement of contracts for new projects. Sherry drove the production software releases for project’s firmware components e.g. for key management and physical security, resulting in the commencement of factory acceptance and manufacturing. She oversaw a seamless integration of new subsystems into legacy hardware and existing systems, demonstrating readiness for a customer-approved transitional pilot phase.

2019 – 2022

Test Engineer, Cubic Transportation Systems, San Diego, CA

Ms. Zhuang employed a variety of testing methodologies spanning the Software Development Life Cycle such as In-Sprint, Performance, and Regression to validate various payment processing devices. She created comprehensive test plans that cover the scope of requirements from key capabilities to broader use cases. Ms. Zhuang also prepared for workshops and regularly demonstrated progress through formal compliance testing, ensuring results were documented in-depth for internal and external reference and evaluation.

Mentoring new team members covering QA processes such as raising defects, as well as technical guidance with log analysis, troubleshooting using Linux scripting, and extracting data with SQL or API was another great achievement of hers. Ms. Zhuang met critical deadlines and maintained a history of no significant defects uncovered in production.

EDUCATION

2018

Champlain College, B.S. Software Development

Ms. Zhuang made it onto the President’s List and was also awarded the Trustee’s Scholar Award

2016

University of California, Santa Barbara, B.A. Biological Anthropology

Ms. Zhuang studied Biological Anthropology, focusing on the evolution of humans, their variability, and adaptations to environmental stresses.