

# ShakaCode + Popmenu

Building and Scaling POS Integrations for 7,000+ Restaurants

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## Client Overview

**Popmenu** is a restaurant technology platform that helps restaurants grow through integrated marketing, online ordering, and point-of-sale (POS) connectivity. Serving thousands of restaurants across the United States, Popmenu's platform connects front-of-house digital experiences with back-of-house operations.

## The Challenge

Popmenu needed to build, maintain, and scale integrations with multiple POS systems -- each with its own API design, data model, sync behavior, and edge cases. The initial scope was a single integration (Square), but the ambition was to support the most widely-used POS platforms in the restaurant industry, enabling menu syncing, online ordering, and payment processing across all of them.

### Key challenges included:

- **Diverse POS ecosystems.** Each POS (Square, Toast, Aloha, Micros, and more) has fundamentally different architecture, authentication, and data structures.
- **Bidirectional sync complexity.** Early integrations attempted bidirectional syncing (changes flowing both ways between Popmenu and the POS), which introduced difficult consistency and conflict-resolution problems.
- **Scale and reliability.** With 7,000+ restaurants depending on accurate menu data and order processing, downtime or sync failures directly impacted restaurant revenue.
- **Legacy system quirks.** Some POS platforms (Micros running on Windows, Aloha's dual-system architecture) required creative approaches and deep protocol-level work.

## The Engagement

<b>Duration</b>	Almost 6 years (August 2020 through March 2026)
<b>ShakaCode Team</b>	3 plus engineers working as an embedded squad within Popmenu's integrations team
<b>Popmenu Team</b>	3 product managers and 2 engineers

## How We Worked

ShakaCode's engineering team was well-embedded within Popmenu, working closely with the product and engineering teams on a daily basis. The team developed a repeatable pattern for launching new POS integrations:

1. One engineer led bleeding-edge backend architecture -- designing the sync engine, data mapping, and API integration layer for each new POS.
2. A second engineer followed closely, building out online ordering flows on top of the menu infrastructure.
3. A third orchestrated coordination, handled escalations, and served as the primary point of contact for cross-functional questions.

This division of labor allowed the team to run multiple integration efforts in parallel and replicate proven patterns across new POS platforms.

The team provided 24/7 engineering support across time zones, routinely debugging production issues during off-hours and maintaining a "Slack message away" responsiveness that the Popmenu team highlighted as exceptional.

## What We Delivered

- **1,000+ pull requests** shipped over the engagement
- **Multiple POS integrations** built and maintained, including Square, Toast, Aloha, Micros, and others
- **Toast V2 re-architecture** -- rebuilt the sync engine for Popmenu's largest and most complex integration, significantly improving reliability and performance while scaling to more customers than ever
- **Payment integrations** including NMI and POS-native payment flows
- **Infrastructure optimization** -- collaborated with Popmenu's DevOps team to scale workers, optimize sync jobs, and build discrepancy reporting

## Results

**Reliability and performance improved.** Through focused re-architecting and optimization of the Toast syncing architecture, the integration scaled to more customers than ever with strong performance and stability.

**Repeatable integration playbook.** The team established a proven methodology for launching new POS integrations, reducing time-to-launch for each successive platform.

**Well-embedded partnership.** The ShakaCode team worked so closely with the Popmenu product and engineering teams that collaboration felt seamless. One product manager described it as "the most high-performing team I've ever worked with."

**Deep product partnership.** Rather than simply executing specifications, the ShakaCode team provided technical pushback, architectural guidance, and proactive problem-solving. As one Popmenu engineer noted: "You guys actually give pushback, and if something doesn't make sense, you'll push back on that, and we have good back and forth, and we eventually arrive at a good solution."

## Client Testimonials

The following quotes came from a farewell meeting on March 31, 2026:

*"This is the most high-performing team I've ever worked with. You're diligent, you're dependable, you care about the details. And you guys didn't just build what we asked -- there was tons of pushback, and I love that."*

-- **Product Manager**, Popmenu

*"You guys took care in understanding the overall solution, not just that one card or that one little epic, and how that fit into the bigger picture. You're looking at how those code changes are going to impact future scalability, future plans. That's rare. You don't typically see that."*

-- **Product Manager**, Popmenu

*"I remember working around the clock. It being 11 p.m. my time, and you were still up doing stuff. I've worked with people that would never have given that. They would just clock out. But you guys stayed with it."*

-- **Product Manager**, Popmenu

*"These guys are moving from country to country with all this going on in the world, and they're like, it's nothing. They're still coming in and giving over 100% every day. That blew my mind."*

-- **Product Manager**, Popmenu

*"We felt like we had partners throughout this whole thing."*

-- **Product Manager**, Popmenu

*"There's going to be big, big shoes to fill. But I hope we get to work together again. I would love to work with you guys again."*

-- **Product Manager**, Popmenu

*"You guys are not just colleagues. Your professionalism, your technical ability, your can-do attitude, your willingness to jump on -- 3:30 p.m. on a Friday afternoon, Toast menu syncing is going sideways. It's always felt like you guys are just a Slack message away, even though it's the middle of the night your time."*

-- **Product Manager**, Popmenu

*"We've developed a very robust and repeatable process. It has been a pattern we have replicated many times."*

-- **Product Manager**, Popmenu

*"Through the focused re-architecting and optimizing of the syncing architecture, we have more customers on that integration than we've ever had. The performance seems to be rock solid."*

-- **Product Manager**, Popmenu

*"We haven't seen anything like that in a very long time, and I think that speaks to the level of attention and professionalism of this team."*

-- **Product Manager**, Popmenu

*"The core team has remained consistent for virtually the whole four years. That's allowed us to really develop trust and understanding, division of skill sets, and how we swarm on problems and not get in each other's way."*

-- **Product Manager**, Popmenu

*"Each one of you have a unique skill set and definite drive to be successful. I don't have any question where you guys are going to land."*

-- **Product Manager**, Popmenu

*"I'm a big fan of all three of you guys."*

-- **Product Manager**, Popmenu

*"You guys are not just code monkeys where we tell you to do things and you just do it. You guys actually give pushback, and if something doesn't make sense, you'll push back on that, and we have good back and forth, and we eventually arrive at a good solution."*

-- **Engineer**, Popmenu

*"It's really tough to have third-party teams who actually care about what we're working on and the overall code quality. I think you guys really try to keep the codebase healthy and clean."*

-- **Engineer**, Popmenu

*"This was my first time coming into a product role, and I can't imagine what another team would be like, because I've heard that not all teams are this great. I don't think I could have grown as much as I could without you guys pushing me and helping me and guiding me."*

-- **Product Manager**, Popmenu

*"I'm going to expect greatness and expect collaboration, and I'm not sure yet if that's good or bad, but I think it's good."*

-- **Product Manager**, Popmenu

*"Thank you for dealing with all my dumb questions and explaining things to me in layman terms so that I could understand and grow and learn."*

-- **Product Manager**, Popmenu

*"Popmenu is 100% better for having you around. The values you bring to the table without us asking -- that's huge."*

-- **Engineer**, Popmenu

*"I know someone else is going to benefit from y'all."*

-- **Engineer**, Popmenu

## About ShakaCode

Founded in 2014, ShakaCode provides embedded engineering teams for complex software projects. Our engineers deeply integrate with client teams, bringing an ownership mentality, architectural expertise, and a commitment to long-term code quality. We specialize in Ruby, TypeScript, and Rust, with deep expertise in complex systems integration, performance optimization, infrastructure cost reduction, and web scraping at scale. Building on over a decade of experience orchestrating complex backend systems, we are now applying that foundation to building agentic AI systems using technologies like OpenClaw, bringing the same rigor and reliability our clients depend on to the next generation of intelligent software.