PROJECT DETAILED REPORT

Code Ready: JavaScript & Digital Literacy Initiative

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EXECUTIVE SUMMARY

Underserved high school students and low-income families in San Francisco's Tenderloin neighborhood faced a widening digital skills gap: little coding exposure for students, and limited digital fluency for families navigating school, work, and services online. As Community Technology Ambassador, Charlie Nguyen redesigned MissionBit's JavaScript curriculum around live, interactive coding and paired it with a family-facing digital literacy track through Dev/Mission. Over a 12-week cohort, the program lifted engagement, graduated dozens of first-time coders, and extended practical digital support to families who previously had none.

Introduction & Background

MissionBit and Dev/Mission both work to bring computer science and digital access to communities historically excluded from the tech industry. Charlie joined this effort after an internship at SLAC National Accelerator Laboratory sharpened a technical foundation, and a subsequent stint teaching JavaScript to underserved high schoolers at MissionBit revealed a clear pattern: students were curious about technology but rarely saw themselves reflected in it, and their families often lacked the baseline digital skills to support that curiosity from home. Code Ready was created to address both sides of that gap at once, inside a single community program based in the Tenderloin.

Problem Statement

Students entering the program had minimal or no prior programming exposure, and the existing lecture-style curriculum struggled to hold their attention or accommodate uneven starting points. In parallel, low-income families connected to the same community sites lacked consistent access to basic digital literacy support — from filling out online forms to using school portals — leaving them dependent on their children or outside help for routine digital tasks.

Objectives & Scope

Objectives:

- Redesign the JavaScript fundamentals curriculum to raise engagement and completion rates
- Stand up a dedicated digital literacy support track for low-income families
- Introduce a beginner-friendly AI-literacy module as a capstone extension
- Track every support interaction to a resolution using a structured ticketing workflow

Scope:

- In scope: one 12-week cohort at a single MissionBit partner site and the paired Dev/Mission community desk
- Out of scope: curriculum translation into languages other than English; hardware distribution or device repair

Methodology & Approach

Charlie replaced passive lecture blocks with live-coding sessions, working through small JavaScript projects in real time so students could see the reasoning behind each line, not just the finished code. Examples were rebuilt around scenarios students already related to — such as building a simple tool for something in their own life — rather than abstract exercises. For the family-facing track, digital literacy support was delivered one-on-one at the Dev/Mission community desk, using a Zendesk-based intake system so every request (an online form, a portal login, a basic troubleshooting issue) was logged and followed through to resolution rather than handled ad hoc.

Resources & Tools

- Curriculum: MissionBit's JavaScript fundamentals framework, adapted for live-coding delivery
- Support workflow: Zendesk for Customer Service Agents (certified via Udemy) for ticket intake and tracking
- Delivery space: Dev/Mission community technology desk and MissionBit partner classroom
- Team roles: Charlie Nguyen as lead instructor and technology ambassador, with support from MissionBit and Dev/Mission staff
- Capstone material: concepts adapted from an award-winning AI Capabilities & Risks Demo-Jam hackathon project

Execution Timeline

Milestone	Timeframe	Status
Curriculum audit & redesign of JavaScript fundamentals track	Weeks 1–2	Complete
Zendesk-based tech-support intake workflow stood up at Dev/Mission desk	Weeks 2–3	Complete
Cohort 1 launch: live-coding sessions begin (MissionBit partner site)	Week 4	Complete
Digital literacy track launched for low-income families	Weeks 4–8	Complete
Mid-program engagement check-in & curriculum adjustment	Week 8	Complete
AI-literacy capstone module piloted with Cohort 1	Weeks 10–11	Complete
Cohort 1 showcase & graduation	Week 12	Complete

Key Deliverables

- A redesigned, live-coding-based JavaScript fundamentals curriculum, ready for reuse in future cohorts
- A functioning digital literacy support track for low-income families, run out of the Dev/Mission community desk
- A logged, trackable tech-support workflow built on Zendesk, replacing ad hoc requests
- A pilot AI-literacy capstone module for advanced students
- A cohort of students who completed the JavaScript fundamentals track and presented projects at a closing showcase

Results & Data Analysis

The redesigned curriculum measurably changed how students engaged with the material. Attendance and active participation both rose after the shift to live coding, and the cohort's completion rate significantly outperformed the prior lecture-based format. On the family side, the Zendesk-tracked support desk gave the program, for the first time, real visibility into what kind of help families actually needed and how quickly it was resolved — most requests were closed within a single visit.

- Higher session attendance and participation versus the prior curriculum format
- Dozens of students completed the JavaScript fundamentals track and presented a final project
- Consistent same-visit resolution for the majority of family digital-literacy support tickets
- Recognition as Youth of the Year ambassador, Boys & Girls Clubs of SF – Tenderloin, tied to the program's community impact

Challenges & Lessons Learned

Roadblock 1 — Engagement:
Students initially disengaged from lecture-style teaching. Charlie addressed this by shifting to live, interactive coding and relatable examples, which became the core fix behind the program's completion-rate gains.

Roadblock 2 — Uneven family digital literacy needs:
Family requests varied widely, from basic navigation to account troubleshooting, and were initially handled inconsistently. Standardizing intake through a Zendesk workflow made triage repeatable and ensured no request was dropped.

Conclusion & Next Steps

Code Ready demonstrated that pairing hands-on coding instruction with structured, trackable digital literacy support can move both students and families forward at the same time, using a shared community space and a single ambassador role. The next phase should build on that foundation.

Next steps:

- Expand the redesigned curriculum to a second MissionBit partner site for the next cohort
- Formalize the AI-literacy capstone into a standing module rather than a pilot
- Translate the Zendesk intake categories into a lightweight quarterly report for MissionBit and Dev/Mission leadership