

## DIGITAL CLASSROOMS/EDUCATION

Played a key role in creating a cloud-based classroom management and remote-education solution for a major technology company



# CONTEXT

## CLIENT

- A multinational technology company

## KEY DRIVER

- Create immersive learning experience for educators and students, and better control for remote classroom administration

## CHALLENGES ADDRESSED

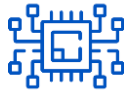
- Inconsistent learning management in classrooms and remote-education
- Ineffective monitoring of student activities during class hours
- Widespread attention difficulties and distractions for students in the virtual classrooms

## **Our client envisioned a classroom and remote-education management solution that:**

- Provides educators and administrators with a comprehensive platform to guide learning, increase collaboration, and maximize classroom productivity
- Provides a browser-based and desktop client applications to teachers and administrators for student monitoring, onboarding, provisioning, et al
- Integrates with third party learning platforms such as Google Classroom and Clever to import student master data and to ensure uninterrupted learning

# SOLUTION – OUR KEY CONTRIBUTION

## DIGITAL SOLUTIONS DEVELOPMENT



Developed classroom management solutions – Cloud-based application, Windows/Mac/Chromebook native client, and Android native client for on-premises version.

## FLEXIBLE & SCALABLE APPLICATION FRAMEWORK



Microservices-based architecture with containerization supporting multitenancy, localized languages, and to effectively manage organizations, classes, teachers, students, and student activities

## ENTERPRISE-GRADE APPLICATION SECURITY



Identity & access management for all types of users, multi-organization access to users, LDAP integration, SSO with Microsoft AD, IP-based access filters for students, and other security features

## OPERATIONS PORTAL DEVELOPMENT



Web-based application for the client's operations team to manage organizations, licenses, agent versions, and delegated support provisioning classes, teachers, and student devices

## TECH STACK

### App UI frameworks

Angular

### On-Device Windows Client

C Sharp, Windows Forms, QT

### On-Device Mac Client

Objective C, Swift, C++, Zsh

### Services

NodeJS with Restify, AWS EC2, Docker, Jenkins, Microsoft AD

### Testing Framework

Nightwatch.js

### Data Stores

MongoDB with Redis

### Cloud, DevOps

AWS Terraform, AWS CI/CD

# SOLUTION MODULES & FEATURES – REFERENCE VIEW

## TEACHER ACCESS



Student Monitoring



Web-limiting



Student Chat Interaction



Student Device Status & Screen Capture



Profile Management



Blank Screen

## ADMIN ACCESS



Class Management



Licensing & Onboarding



Student/Teacher Administration



Security & Password Policy

## OPERATIONS PORTAL



Organization Management



Feature Management



Software License Management



Delegated Class Administration



Tenant Onboarding

# SOLUTION KEY CAPABILITIES

## Powerful In-Class Monitoring



Enable teachers to view student activities, ensure student attentiveness, eliminate questionable behavior, and control inappropriate internet usage

## Enhanced Communication



Allow students and teachers to interact seamlessly through audio/text chats, classroom activity alerts, different broadcast modes, and screen sharing

## Simplified Administration



Allow organization admins to easily manage classroom creation, define active hours, student provisioning, teacher/student onboarding, and license management with a comprehensive UI

## Easier Tenant Management



Enable client teams to utilize an organization specific interface to create, invite, onboard new schools, and manage customer database, platform features, licensing, orders, and students





# END-USER ORGANIZATION OUTCOMES

## MAXIMIZED PRODUCTIVITY

In classrooms through enhanced student monitoring, web-limiting technology, and student device control



## ENHANCED COMMUNICATION

Between teachers and students through one-to-one chats, push notifications and visual signals (e.g., hands raising)



## STREAMLINED MANAGEMENT

Of organization-level administrative activities through admin and client modules for onboarding, licensing, provisioning, and related activities





## ENGAGEMENT HIGHLIGHT & CLIENT ORGANIZATION BUSINESS OUTCOMES

**3+** YEARS



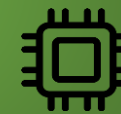
Continuous  
engagement  
across many  
releases

**30+** MEMBERS



Peak team size  
involved in  
solutions  
development

**50K** DEVICES



Monitored across  
schools in the US,  
Europe, and APAC

*Note: Data is indicative and as of 2020*



## Customer Success Briefs



# THANK YOU

Digital Customer Experience.