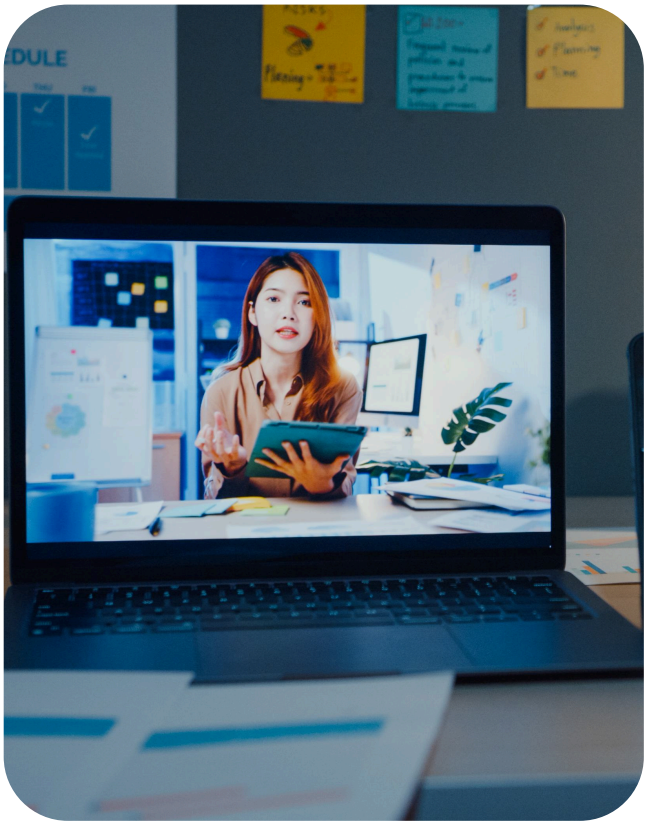
QBurst | A High AI-Q™ Company

AI-Powered Video Learning and Engagement Platform for Digital Education

Enabling scalable lecture capture, interactive learning, and AI-powered content experiences for modern education environments.

Overview

- Contributed to the design and implementation of a scalable video learning and engagement platform supporting lecture capture, content management, analytics, and interactive learning.
- Enabled automated video workflows, AI-powered transcription, summarization, and LMS integrations across institutions.
- Increased learner engagement by 35% and reduced manual lecture processing effort by 40%.
- Supported large-scale learning delivery with 99.5% uptime and over one million hours of video content annually.



Client Profile

The client is a global education technology provider offering a cloud-native ecosystem for video learning, engagement, assessments, and digital curriculum experiences across higher education and enterprise environments. The platform supports more than two million learners through lecture capture, live streaming, interactive playback, analytics, assessments, and AI-powered learning capabilities.

Challenges

- Fragmented legacy content management systems limited scalability and operational efficiency.
- Manual lecture capture, processing, and publishing workflows required significant effort.

- Limited analytics capabilities restricted visibility into learner engagement and outcomes.
- Lack of seamless integration with widely adopted LMS platforms impacted interoperability.
- Reliability and performance issues emerged during peak academic usage periods.

QBurst Solution: Scalable Cloud-Native Platform

We contributed to the design and implementation of a scalable video learning platform supporting lecture capture, content management, analytics, and interactive learning experiences.

- Microservices architecture with Kubernetes-based container orchestration for scalable deployment.
- Serverless components for peak workload handling and event-driven video processing.
- Elastic storage and CDN-backed delivery for large-scale video repositories.
- Secure user access and LMS interoperability through LTI-based integrations.
- Real-time video encoding and streaming support.
- Multi-tenant architecture supporting higher education and enterprise learning environments.

AI-Powered Learning and Content Enablement

The platform incorporated AI and machine learning capabilities to improve accessibility, engagement, and content generation.

- AI-powered speech-to-text transcription and captioning.
- Semantic search, topic segmentation, and searchable video experiences.
- LLM-based summarization and key-concept extraction.
- AI-assisted quiz and assessment generation aligned with lecture content.

- Automated generation of structured course materials from video content.
- Engagement analytics to identify interaction patterns and support learning insights.

Interactive Learning and Analytics Experience

- Interactive video playback with quizzes, polls, discussions, and participation overlays.
- Real-time engagement analytics and reporting dashboards.
- End-to-end automation of lecture capture, processing, and publishing workflows.
- Integration adapters supporting compatibility with multiple major LMS platforms.

Technical Highlights

- Kubernetes-orchestrated microservices architecture on AWS EKS.
- Event-driven serverless workflows for video ingestion and processing.
- AI-powered transcription, summarization, semantic search, and quiz generation pipelines.
- Interactive video player with embedded quizzes and discussion overlays.
- Multi-tenant support for universities and enterprise learning environments.
- Integration adapters for multiple LMS platforms.
- Real-time analytics and reporting dashboards.
- Automated video workflow from capture to publishing.

Impact

- Increased student engagement by 35% through interactive learning capabilities.
- Reduced manual lecture processing and publishing effort by 40%.

- Achieved 99.5% uptime during peak academic usage periods.
- Reduced instructor support tickets by 30% post-launch.
- Scaled to support more than one million hours of video content annually.
- Accelerated institutional adoption through LMS compatibility and seamless integrations.