

Overview:

The requirement was to develop a website which would act as an online marketplace for finding tutors and instructors who are keen to offer their services to teach/train interested users looking to develop various skills. The range of areas covered is segregated under three broad headings – Academic, Languages & Music. Users are expected to create their accounts, identify the teachers in their areas of interest and proceed to schedule sessions with them, which can be either online or in-person. The sessions again can be offered in private or as part of a group. The date-and-time of sessions is finalized based on mutual consent.

Client details:

Name: Confidential | **Type:** Education | **Location:** USA

Technologies:

Python 2.7(Django 1.8 as web framework), Angular 1.4.10, Bootstrap, Redis as message broker, Celery as task server, Hosted on AWS EC2, Large files hosted on AWS S3

Project Description:

With the help of this interface, the client wanted to serve two purposes. The first was to ensure that individuals seeking to develop certain skillsets are not deprived of the opportunity because of locational constraints. The second one was to extend an opportunity for people possessing reasonable expertise and skills, in various areas, to pass them on to their seekers; and gaining financially from the process as well. Required features and attributes are provided in the website to enable the seekers to reach out to the best teachers/mentors, allow both the parties to evaluate each other, and set the expectations for the interaction to be thoroughly engaging for them. For instance, teachers are required to share their biographies and, for a certain skill, prices that they charge across different levels of users – beginner, intermediate, advanced. The eligibility criteria of users, if required, are also mentioned. Overall, the platform works wonders in allowing both the parties to engage in a productive manner, and get over constraints pertaining to lack of time, convenience or location.

During the course of developing the application, the client expressed that he would want the users to have the ability to upload large files (video, audio and document) over to the web application.

Now, the application ran on AWS EC2 instances, with the database being on RDS. The media and static files are supposed to be stored on the AWS S3 server. But since the need was expressed to handle files which could potentially be in gigabytes, it was not resource efficient to send them first to EC2 and then to S3.

The development team investigated and suggested the use of AWS SDK for JavaScript that would upload the files directly to S3 from the client browser after user verification. Also, S3 provides a great feature using which the files can be sent to S3 in parts, by breaking a file into chunks on the client machine and then the rebuilding the chunks in order on S3 automatically. Thus, using the AWS SDK for JavaScript for S3, the team built the feature needed to enable multi-part uploads directly to S3 server of the application

Benefits

- File uploads were faster by more than 20%
- The upload process was non-blocking since the background threads were uploading the video chunks.

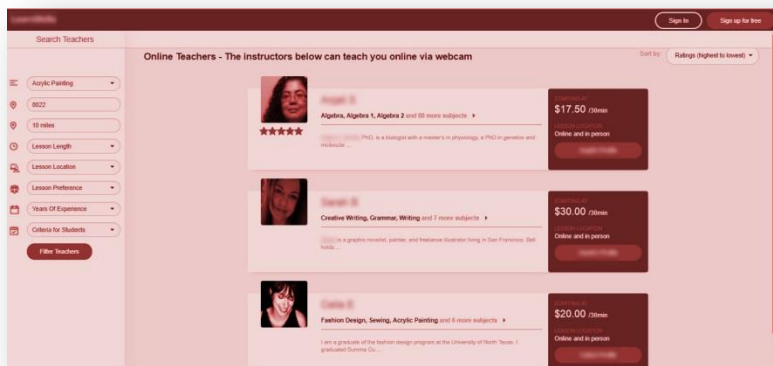
Other Features

Leveraging on the capabilities of the platform, the client wanted to offer customized solutions to

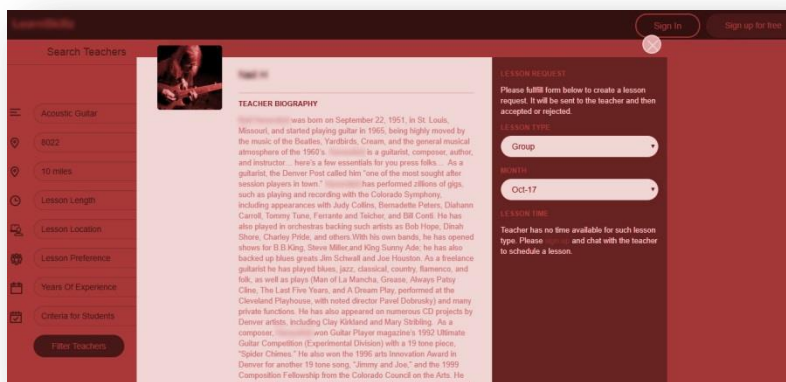
Enterprises: in the form of interactive, engaging content offering the provision of both instructor-led training and e-learning

Educational Institutions: Content as well as instructor-led solutions for offering fun, educational and enrichment programs

Screenshots:



Screen 1: Teachers in a certain zip code



Screen 2: Profile of a teacher



Screen 3: Enterprise sols



Screen 4&5: Education sols