



tunessence

EXECUTIVE SUMMARY

Music is a fundamental part of us, a vehicle for creativity, emotion, and passion. That's why 40 million people in the US spend \$15 billion annually trying to learn an instrument. Many hopeful musicians attempt to learn online, finding videos to be the best available solution. Unfortunately, their enthusiasm is quickly curbed by the difficulty of learning an expressive art through a limited medium.

Tunessence is using software to reimagine how guitar is taught. Our online service will teach interactively, using pitch detection and recommendation algorithms to replicate the effective and personal nature of private lessons.



WHO WE ARE

Tunessence was founded by Alexander Soto and Matthew Bauch in June 2012. They worked together extensively at Carnegie Mellon University, both earning bachelor's degrees in electrical and computer engineering and graduating with honors.



Alexander Soto has experience developing software and digital hardware at the U.S. Department of Defense, NVIDIA, and Qualcomm. He has played trumpet for 12 years, participating in solo competitions and national honor bands.



Matthew Bauch has research experience at NASA in the areas of digital signal processing and applied physics, with multiple published papers. He also has industry experience at Intel. He is a self-taught guitarist with 11 years of experience.



Ben Rainey is a professional guitarist and adjunct professor at Carnegie Mellon. He has taught for 7 years, inspiring over 150 private students. He has a B.A. in music performance from CMU.

Opportunity

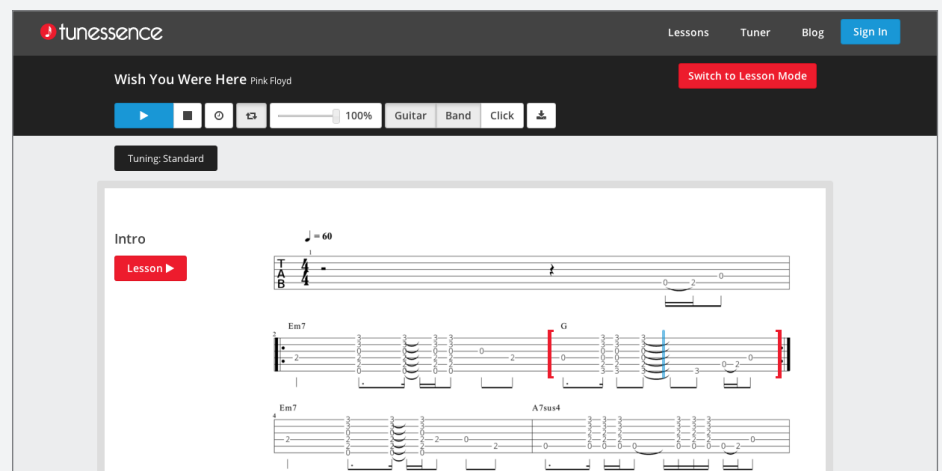
There are 6 million people learning guitar; of these, 3 million are teaching themselves. With a subscription model of \$20 per month, capturing 1/6th of self-teaching guitarists represents 500,000 users and \$120 million in annual revenue. That is only the beginning. Expanding to other instruments enables us to serve an additional 34 million customers, a \$9 billion market.

It's 2013 - I'm still learning music how!?

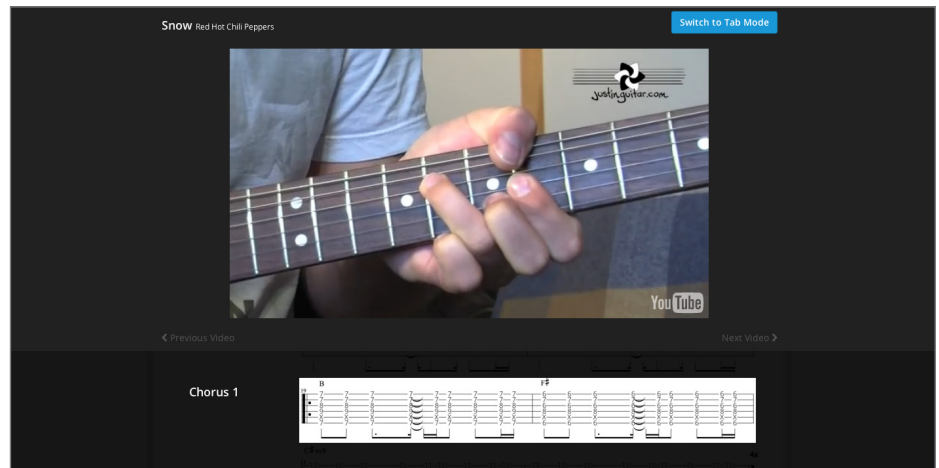
Learning online has exploded in popularity. Dynamic and personalized learning platforms have been built for math, language, and computer science. Music has no such alternative. Online music lessons have not progressed beyond static sites and videos, and are no better than books or DVDs. Is it a surprise that 70% of those who attempt to learn guitar quit within two months?

There is a better way

Tunessence teaches guitarists what they want to learn - the songs they love. Tunessence combines music notation (guitar tab) with audio and video to create an effective and engaging platform to learn songs. Everything is synchronized, reinforcing concepts through different mediums.



The screenshot displays the Tunessence website interface for a guitar lesson. At the top, the Tunessence logo is on the left, and navigation links for 'Lessons', 'Tuner', 'Blog', and 'Sign In' are on the right. Below the logo, the song title 'Wish You Were Here' by Pink Floyd is shown, along with a 'Switch to Lesson Mode' button. A video player interface is visible, including play/pause, stop, and volume controls, a 100% volume indicator, and buttons for 'Guitar', 'Band', 'Click', and a download icon. Below the video player, the 'Tuning: Standard' is indicated. The main content area shows the 'Intro' section of the lesson. It features a 'Lesson' button and a guitar tab. The tab is set to 4/4 time with a tempo of 60 bpm. The first staff shows the intro with a 'Lesson' button. The second staff shows the Em7 and G chords. The third staff shows the Em7 and A7sus4 chords.



Some students use a variety of separate tools to achieve this effect. However, these tools are not cohesive, accurate, synchronized, or interactive. Other students attempt to learn through only one medium, leading to frustration. Tunessence combines the best methods of learning guitar online, creating an experience students love.

The computer as a teacher

We believe that software can achieve 90% of what private music instructors do at a fraction of the cost. Future versions of Tunessence will build upon our song-based learning system and emulate instructors through a dynamic curriculum that splits music into its basic elements, and pitch detection to assess progress.

Instructors create individualized lesson plans for their students, taking into account goals, abilities, and weaknesses. Splitting music into its fundamental components enables Tunessence's software to mirror this behavior. Students choose which songs they want to learn and core musical concepts that are required (like "boring" scales) are presented as needed and in the context of inspiring music. Our approach motivates students to learn an otherwise uninteresting skill and creates a unique journey for each individual.

We have prototyped pitch detection algorithms that allow our software to highlight missed notes and give students feedback on their playing. Additionally, we will recognize musical concepts that the student has not mastered and give them exercises that will help them improve. This is the same approach private instructors use to give guidance and feedback.