

Scott Morse
Full Stack Developer
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A software engineer with a background as a professional musician. Experienced as a composer, performer, and educator, and educated in full stack development by DigitalCrafts.

Any developer who has studied music intensely knows how the thought processes involved with coding and music theory are highly related to each other. My background in music has also built my communication skills, from having to rehearse and perform with hundreds of musicians from around the world, and from years of experience as a private instructor. I love music, and I also love to program, as I enjoy spending my days creating and problem-solving.

Skills:

Languages: JavaScript | Python

Front End:

- React
- Redux
- Next.js
- Apollo
- HTML5 / CSS

Back End:

- Node.js
- Express.js
- GraphQL
- SQL
- Prisma

Certification:

DigitalCrafts | Full Stack Immersive Program | Houston, TX

September 2018 - January 2019 (presently attending)

An immersive software engineering training course covering full-stack development including, but not limited to: JavaScript, Python, cutting-edge frameworks like React/Redux, and server-side technologies in Node/Express and databases such as PostgreSQL and MongoDB.

Education:

University of North Texas | Bachelor of Music: Jazz Studies

Graduated May 2016

Summa Cum Laude

For anyone curious about the UNT College of Music's significance in the musical community:

https://en.wikipedia.org/wiki/University_of_North_Texas_College_of_Music

It is the birthplace of jazz education, making it a rare conservatory-level program in a state university

Projects:

AtmosFear (React / Redux game)

<https://github.com/ScottMorse/AtmosFear>

atmos-fear.herokuapp.com

Date completed: December 6th 2018

This project was a challenge for myself to create a game in React from the ground up in 3 days, and I succeeded. In this game, you are a space shuttle avoiding collision on the way to space. React is used for the front end, and Redux is used to manage the state of the game. It features:

- Music and sound FX composed by myself
- Pixel graphics created also by myself
- Use of Redux for overall game state (level, health, hit boxes, etc.)
- It is compiled with Webpack and Babel for compatibility and optimization

PyMusician (Public Python3 package)

<https://github.com/ScottMorse/PyMusician>

License: Apache-2.0

Date completed: v1.0.0-beta released to PyPi on October 8th. Current version: 1.0.1. Updates and maintenance will continue.

The goal of this Python package is to be a comprehensive library of utilities useful for developers who are also well versed in common practice music theory. Examples of it's purpose include:

- Converting a musical note into it's scientific frequency measured in Hz, and vice versa
- Performing transformations on musical notes using the concept of "intervals"
- Creating objects representing larger musical structures, such as modes and chords
- Parsing a common chord symbol as seen on a lead sheet, and returning an accurate chord object

I maintain this code as a long-term project to grow it into a package that will eventually compete with the handful of other similar packages available publicly. I use this package in my own personal projects, where I catch errors and come up with new features and other ways to improve it.

React Blackjack (React game with Node.js server)

<https://github.com/ScottMorse/ReactJack>

<https://react-jack.herokuapp.com/>

Date completed: October 20th, 2018

This is what it sounds like, the casino game Blackjack in React! Player can choose what to bet, and chooses to hit or stand when there has been no Blackjack.

It deals with all the following events/rules:

- Dealer busts
- Player busts
- Player or dealer wins when no busts happened
- Draw
- Player busts
- Player chooses bet each hand
- Player hits or stands only when allowed
- Dealer draws to soft 17
- Blackjack pays the player 3 to 2

Houston Flood Gauge Web App (Express.js / PostgreSQL website)

<https://github.com/ScottMorse/Houston-Flood-Gauges>

<http://houston-water-levels.herokuapp.com>

Date completed: November 16th, 2018

I developed this project in a team of developers from DigitalCrafts. We received the idea from the website for the Houston Hackathon, where someone had made a post asking for developers to create a website that measures the water gauge for Lake Houston. Our website shows the most recent data from USGS on fresh water bodies in the Houston area, and provides useful links for Houston residents.

Technologies: Express.js, Node.js, PostgreSQL (pg-promise), HTML Canvas, [USGS API](#)

Experience:

City of Houston public website: *October 2018-Present*

- Giving the menu for <https://www.houstontx.gov/directory/> an overhaul to use interactive animated hamburger menus instead of the current outdated view.
- Ensuring mobile responsiveness of the webpage

Startherenow: *September 29th, 2018*

- Advisor for women's startups for a local hack-a-thon in Houston, TX
- Error-handler, troubleshooting errors with the teams' developers in frameworks such as React

Resident jazz guitarist for luxury cruise companies Oceania and Regent: *August 2017 - August 2018*

- Sight-reading music for headline shows daily (reading music in performance with little to no practice)
- Working with international teams of musicians with no prior rehearsal or meeting
- Playing highly detailed production shows each week with a cast of singers, actors, and dancers
- Basic international maritime training (STCW), duties in safety drills for guests

Composer/Guitarist: Tertium Quid *August 2017*

- Composed and performed original blues guitar background music for the short film *Tertium Quid*, which has been shown in numerous film festivals nationwide.
- Trailer featuring my soundtrack: www.youtube.com/watch?v=dCo38Y_89M4

Private Music Instructor: *March 2015 - July 2017*

- Gave professional instruction to about 40 students a week from ages between 7 and 80.
- Improved students' guitar technique and knowledge of music theory
- Directed small bands of students
- Led one student to placing 2nd in the state of Texas for the TMEA All-State jazz competition for high school musicians after 2 years of study with me