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**Full Stack Developer**  
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A React / Node full stack engineer with a background as a professional musician. Author and maintainer of a Python package for music theorists that is part of the public Python library. Experienced as a composer, performer, and educator of music, and now educated in full stack development by DigitalCrafts. I've worked with people from all over the world and have friends on every continent (minus Antarctica). Honest, ambitious, and always looking to surround myself with people to learn from.

### **Skills:**

**Languages:** JavaScript | Python

#### **Front End:**

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

#### **Back End:**

- Node.js
- Express.js
- GraphQL
- SQL
- MQTT

### **Certification:**

**DigitalCrafts** | Full Stack Immersive Program | Houston, TX

*September 2018 - January 2019*

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.

### **Education:**

**University of North Texas** | Bachelor of Music: Jazz Studies

*Graduated May 2016*

Summa Cum Laude

Info on the UNT College of Music for the curious:

[https://en.wikipedia.org/wiki/University\\_of\\_North\\_Texas\\_College\\_of\\_Music](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

### **Experience:**

**Instructor of JavaScript: Girl Develop It (Houston, TX)** *January 2019 - Present*

- The company is a non-profit dedicated to educating women in tech, though men may participate
- I am a primary instructor of JavaScript, teaching students who pay to attend a 4-part course on how to start building a website utilizing JS (ES6) from a knowledge of only HTML and CSS.

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

- 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 playing: [www.youtube.com/watch?v=dCo38Y\\_89M4](http://www.youtube.com/watch?v=dCo38Y_89M4)

### **Projects:**

- **IoT Gateway & Progressive Web App ( for local software company Timbergrove )**

*Date completed: January 17th, 2019*

#### **Summary of Technologies:**

Gateway: Node, Express, Node-Red, Mosca (MQTT broker), SQLite3, Mocha (testing)

Progressive Web App: React, Redux, Webpack, service workers, IndexedDB, InfluxDB

I was part of a small team of developers that created the prototype of two IoT applications for Houston software startup Timbergrove.

I designed the first application, a “gateway” based in Node.js that would live in an edge device such as a Raspberry Pi. A client’s gateway would be connected to sensors such as humidity and temperature of a warehouse. It receives data from these sensors, which it saves to a local SQLite database and allows for a local connection to a WebSockets server for realtime data.

I also wrote the boilerplate and contributed to the frontend of the second application, a Progressive Web App based in React/Redux which can connect to the gateway application in order to display the data received in graphs and dials, and it can push this data to Timbergrove’s cloud database for IoT data.

#### - **PyMusician ( Public Python3 package )**

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

License: Apache-2.0

Current Version: 1.0.2 (*v1.0.0-beta released to PyPi on October 8th, 2018*)

**Summary of Technologies:** Python 3.6, Numpy, Regular Expressions

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.

#### - **React / GraphQL Full Stack E-Commerce Website**

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

<https://pickinporch.herokuapp.com/>

Date Completed: December 19th, 2018

**Summary of Technologies:** React, Next.js, Apollo Client, GraphQL Yoga, Prisma

This is a prototype e-commerce website that has full frontend and backend. The frontend server uses the Next.js framework for server-side rendering of React. The Apollo Client communicates with a backend GraphQL Yoga server (an Express-based server for GraphQL), which is connected to the Prisma service, which allows for basic GraphQL CRUD operations on a remote PostgreSQL-based database.

It also features the Stripe API for checkout, and the website is mobile responsive, using the Styled Components library for styling.

See the GitHub README for more overview on the technologies used.

#### - **AtmosFear ( React / Redux game )**

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

<https://atmos-fear.herokuapp.com>

Date completed: December 6th, 2018

**Summary of Technologies:** React, Redux, Webpack, Babel

This project was a challenge for myself to create a game in React from the ground up in 3 days (no “game tutorials” used), 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