



## Personal Summary

Software Engineer with a PhD on Materials Science and Engineering, a master on Physics. A problem solver with passion on coding and math. Seeking for a role to learn, grow and apply technical skills.

## Technical Skills

(Languages & Technologies) JavaScript, Python, HTML5, CSS3, PostgreSQL, React, Redux, Node.js, Webpack, Sequelize, Express.js, Git. (Tools) Github, VSC, Heroku, Render, Material UI, npm. (Methodologies) Test-Driven Development (TDD), Progressive Web App (PWA).

## Projects

GOJI | C2C Web App | Team Project ([link](#))

November - December 2022

- Leveraged React to design and construct a fast, reliable app with an engaging user experience.
- Integrated Redux store to manage application state while building user interface.
- Developed RESTful APIs for CRUD operations, allowing users to edit, add, and delete services.
- Setup map to show locations of users with search, filter, and link properties based on Google Maps Platform.
- Implemented a Progressive Web App (PWA) to ensure app portability and compatibility on all platforms.
- Utilized Excalidraw to manage tasks across the team.
- Collaborated with the team through peer debugging, trouble shooting, functional testing, and performing code reviews, pull requests, and determining priorities during web development.

Foodieshop | Ecommerce App | Team Project ([link](#))

October - November 2022

- Utilized React and Redux to build an ecommerce app for buying and selling pet food.
- Designed the database schema and set up relational database to support standard SQL queries.
- Constructed interface for the frontend to interact with the PostgreSQL database described by JSON schemas through Sequelize ORM (Object - Relational Mapping).
- Authenticated users with Express middleware and encrypted data to protect user information.
- Implemented localStorage to cache data efficiently for adding and deleting items from guest cart.
- Deployed app on Heroku/Render and managed deployments using Github actions.

AI Music Player | Solo Developer ([link](#))

November 2022 - Present

- Programmed in Javascript, HTML5, CSS3, React, and Material UI to develop and design a website to play music controlled by voice.
- Fetched data from Spotify APIs with Alan AI and built a user interface with Material UI.
- Utilized TDD to iteratively build the website.

## Experiences

Software Engineer Student

FullStack Academy, NY | May 2022 – Dec 2022

- Learned and developed fullstack web applications and SPAs by NERP (Node, Express, React, PostgreSQL) stack.

Scientific Associate

Brookhaven National Laboratory, Upton, NY | Jan 2021 – now

- Developed structure models and simulated XRD data in Python with various algorithms.
- Interacted and collaborated with customers/users to help them with instrument setup and data processing.

Research Associate

City University of New York, New York, NY | Sep 2019 – Jan 2021

- Designed and simulated the interaction between the 3D nano particles and photonic crystals with TypeScript.

Research Associate

Brookhaven National Laboratory, Upton, NY | Aug 2016 – Aug 2019

- Developed GUI with python to read, fit and plot data.

## Education

Certificate in Software Engineering

FullStack Academy - New York, NY | Dec 2022

Ph.D. in Materials Science and Engineering

University of Tennessee - Knoxville, Tennessee | Jul 2016

M. Sc. in Physics

Shandong University - Ji'nan, China | Jul 2011

B. Sc. in Physics

Shandong University - Ji'nan, China | Jul 2008

## Awards & Activities

- Academic achievements on researches: more than 40 publications with > 1000 citations ([link](#)) and 1 patent ([link](#)).