

Humberto Nelson

Fullstack Software Engineer

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TECHNICAL SKILLS

Proficient: Node, Javascript, React / Redux, Git, Express, SQL, Sequelize, HTML, CSS

Knowledgeable: Python, Kotlin, JWT, CI/CD, Mocha, Chai, SuperTest

TECHNICAL PROJECTS

Right Roomie | **Software Engineer** | March 2023 | [Link to the project](#)

- Developed a CRUD roommate matching fullstack application where users can communicate with each other via email after matching with each other across 10 compatibility metrics
- Designed GUI with React to modularize components for reusability, with the power of the virtual DOM for fast performance, and one-way binding to enforce code stability
- Various page routes were connected using React Router for navigation to maintain a seamless single page application
- Used PostgreSQL database for its superior handling of diverse, non-relational data types and utilizing table inheritance for rapid setup and for interconnectivity between users allowing for easy handling of data involving a user's information matching to another user's profile

Fullstack Furniture | **Software Engineer** | January 2023 | [gsteam3.onrender.com](#)

- Developed a CRUD fullstack application where users can browse through an imaginary furniture store, leave a review for each product and purchase the furniture
- Implemented Express modularized architecture and middleware design pattern for structured handling of HTTP requests to API endpoints
- Utilized JWT for user authentication to ensure a user's private account information remained with that user

Introduction to Python for Detecting Disease | **Software Engineer** | June 2020 |

[replit.com/@nlsn243/Edvotek-Sickle-Cell-Anemia-Application](#)

- Independently introduced and developed a novel introductory bioinformatics coding kit into the company using Python Programming language for high school and college students
- Demonstrated the use of Python's data science analysis library called Pandas to destructure the data into Dataframes
- Developed a guide to help those lacking coding experience to gain a sufficient understanding of Python in order to complete the coding kit assignment and get the project running successfully

EXPERIENCE

Scientific Associate | **Qiagen** | Germantown, MD

September 2020 - Present

- Recording and analyzing experimental data and results, verifying data integrity and accuracy, and presenting findings to the team
- Perform literature searches and have a broad knowledge and deep understanding of literature in the immunoassay and infectious disease fields
- Contribute to a team working on the design, development and improvement of immunodiagnostic assays based on ELISA and/or lateral flow technology

Quality Control Scientist | **Edvotek** | Washington, DC

May 2019 - June 2020

- Performance of quality control procedures using molecular and immunological techniques on a large variety of biotechnology kits that encompass the entire collection of Edvotek's catalog before being sent out to educational institutions such as K-12 schools, universities, colleges and research labs.

- Provided customer service to instructors and researchers with technical questions about any of Edvotek's kits, their constituent components and any equipment ordered for their experiments
- Independently developed an introductory bioinformatics kit using Python programming language

Molecular FISH Technologist | P4 Diagnostix | Beltsville, MD March 2016 - June 2020

- Recording of Urovysion FISH probe results using a Bioview imaging system for abnormalities in urothelial cells
- Manually screening of cases using a fluorescent microscope
- Uploading of findings to the Vitalaxis LIS to pathologists for review and interpretation

Lead Cytology/FISH Technician | P4 Diagnostix | Beltsville, MD November 2013 - March 2016

- Performance of all manual technical procedures relating to Fluorescence In-Situ Hybridization (FISH) patient specimen preparation as well as training other employees
- Troubleshooting, maintenance and repair procedures for all FISH instrumentation
- Maintenance completion of document records in real time that includes but is not limited to department logs, files, and worksheets

Test Developer | American Institutes for Research | Washington, DC February 2013 - November 2013

- Creating the scoring logic and algorithms of exam questions for Ohio and Hawaii standardized exams
- Utilized American Institutes for Research's proprietary programming language and software for the scoring logic of each exam question
- Created Biology test questions for Ohio state

PUBLICATIONS

Title: NURF Localizes in Gene Bodies to Regulate mRNA Processing

Link: https://faseb.onlinelibrary.wiley.com/doi/abs/10.1096/fasebj.30.1_supplement.1053.1

Topic: Understanding how chromatin remodeling complexes are recruited to chromatin is important to our understanding of how they regulate gene expression.

EDUCATION

Fullstack Academy Web Development Bootcamp
Software Engineering Certificate
Full-time, Full Stack Javascript Web Development Immersive

September 2022 - March 2023

Virginia Commonwealth University
Bachelor of Science in Biological Sciences

December 2012

VOLUNTEER EXPERIENCE

Research Assistant | Aug. 2012 – Feb. 2013

Goodwin Research Laboratory Richmond, VA

- Independently conducted various time-sensitive, meticulous experiments and tests
- Techniques included: Bacterial culturing/cloning procedures, plasmid digestions, analytical gel electrophoresis, DNA extraction, quantification of nucleic acids by spectrophotometric absorbance with Nanodrop 2000 machines, PCR
- Maintenance of plated bacterial cultures in refrigerator

LANGUAGES

Spanish

- **Verbal:** Fluent
- **Written:** Fluent