

Anusha Tuladhar

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Skills JavaScript, React.js, Redux.js, Ruby, Ruby on Rails, HTML5, CSS3, Git, PostgreSQL, jQuery

Projects

AtSeedWorld (JavaScript, React / Redux, Ruby / Rails, HTML, CSS, PostgreSQL, Amazon S3)

[Live Site](#) | [Github](#)

Description

- Correlated Ruby on Rails utilizing Users, Listing, Review, Bucket and other ActiveRecord models and controllers to pass relevant information to frontend.
- Utilized json builder to pass data to front end by incorporating ajax to make API calls over HTTP requests.
- Employed React Hook to filter the data and fetch specific seed based on user's search bar input
- Utilized mapStateToProps to pass appropriate slices of the redux store to components in order to avoid additional AJAX queries and render features for the user.
- Optimized database usage and eliminated N+1 queries by observing SQL and Active Record best practices.
- Adhered to React and ES6 best practices to generate a true single page reactive web app experience.
- Effectively used JavaScript to stop users from accessing certain forms/functionality if they are not logged in and also switching forms conditionally.

GardenCalendar (JavaScript, Vanilla DOM, HTML5, CSS, Chart.js)

[Live Site](#) | [Github](#)

Description

- Applied Chart.js to create graph to indicate when and how to grow specific seeds and plants
- Fetched data via Vanilla DOM to filter out the planting guidance based on user's request
- Implemented the modal that shows specific instructions for each plants solely with CSS and html

GlobalCuisine (JavaScript, MongoDB, Amazon S3, HTML5, CSS)

[Live Site](#) | [Github](#)

Description

- Created, stored and utilized database from MongoDB to pass information to frontend.
- Implemented picture uploading function via Amazon S3, and Multer.
- Employed Amazon S3 to generate the image url to directly seed the data via postman and MongoDB.
- Used BCrypt's hashing algorithm for password to ensure that the user's password is secure.
- Utilized the Validator.js library to validate user input in the controller before saving data into a MongoDB database in order to ensure that user enters all the required fields needed to create account, login and create a recipe.

ATbnb (JavaScript, Amazon S3, AWS, Google Maps API, HTML5, CSS)

[Live Site](#) | [Github](#)

Description

- Created a clone of Airbnb that solely focuses on cities close to San Francisco.
- Implemented Google Maps API to showcase the exact location of the listing.
- Employed AWS S3 for media storage and organization while maintaining content security with AWS IAM.
- Used "photo_attachment"::blob to prevent Active Storage from hitting the database for every photo of the listing hence avoiding the N+1 query.
- Utilized CSS3 flexbox with z-index and React-Modal for an effective and flexible layout.
- Customized back and front end user authentication by using Rails conventions, Active Record and React-Router higher order components.
- Leveraged Webpack and Babel to ensure a reliable uniform user experience across web browsers.

Experience

Pacific Architects and Engineers /DHS, San Francisco, CA

Biological Scientist/QA lead

Feb 2016 - July 2021

- Successfully and promptly trained new employees on DNA extraction, Fluorogenic 5' Nuclease qPCR Assay, and Quality Assurance, and Quality Control techniques in a short amount of time to avoid employee shortage and increase workload on current employees.
- Performed functionality and calibration test on equipment such as Applied Biosystem 7500 Fast DX instrument, centrifuge, Bead Beater, and BioSafety Label 2 Cabinet according to user's manual to ensure that Lab's equipment is always meeting the DHS standard.
- Performed Competency test on all the employees every year to ensure that employees are following the DHS and the lab protocol to ensure that all the laboratory results are 100% accurate as any false positives or negatives could result in termination of the entire lab.
- Worked with internal and external functional group members to strategize end to end logistics for sample collection, processing, analysis and shipment plan to ensure that all the groups are up to date regarding the process and expectation.
- Managed sample database, fire queries based on missing or discrepant information to the sample handling team in order to update Center of Disease Control and Department of Homeland Security about any issue the laboratory might have faced is any given day.

- Performed internal audit every year to prepare the lab for DHS external audit which led to increased in the laboratory audit scores by 30%.
- Enforced monthly work division system so the employees would know exactly what they are expected to do every day which allowed the employees to manage their time accordingly and also created an equal workload environment.
- Convinced the manager to have one on one meeting with each employee every month so the employees can share any issues or any ideas they might have to improve the laboratory and work environment which significantly helped employees be more upfront and reduce conflicts.
- Created Quality Assurance form that helps the laboratory to keep track of all the upcoming due dates for any task involving quality assurance such as calibration of the equipment, internal audit, competency assessment, reagent shipment etc which helped the laboratory be more organized and be on top of all the due dates and prompted the laboratory to frequently check with DHS and CDC on the status of the order.
- Created Reagent and Supplies tracking form to encourage the laboratory to check the reagents and equipment supply every two weeks. This saved DHS a lot of cost on shipment as the laboratory often ran out of reagents and DHS frequently had to do same day delivery to ensure that the laboratory can perform the tests.
- Took a lead in converting the laboratory to a mainly digital workspace instead of relying on hard copy files and documents to store important information. This not only helped the laboratory to be more organized and prevented the laboratory from losing or misplacing important documents but made it easier for the staff to access any documents quickly..

Pacific Architects and Engineers /DHS, San Francisco, CA

Molecular Biologist

Aug 2014 - Jan 2016

- Develop an Actionable Result (DAR) communication tree detailing the steps that need to be taken and personnel who need to be contacted in occurrence of the positive results which helped keep the laboratory organized and the employees prepared for emergency.
- Prepared Correct Action Report or deviation request for times when the employees accidentally deviate from the protocol or when the DHS protocol requires the laboratory to follow specific requirements but is not allowed by the public health department to follow. These reports helped the laboratory keep record of any incidents and helped avoid making similar mistakes in future.
- Maintain chain of custody and generate archive label for analyzed and verified samples with additional attributes based on the results.

Zyomyx, Fremont, CA

Research Associate

Sep 2013 - July 2014

- Synthesize, purify, and fractionate nano/micro particles.
- Synthesize Au and CD4 magnetic beads for point of care CD4 T-cell test.
- Perform conjugation, aliquotation, and lyophilization of colloidal reagents and protein.
- Developed protocols that could help the company to scale up on reagent production by 10 times and ensure that the protocol was easy to understand by people with science background.
- Maintained the laboratory reagents and equipment supply to ensure that the laboratory did not run out of reagents and spending is within the budget.
- Perform in-process QC testing (pH, Osmolarity, Optical Density, volumetric).
- Perform magnetic beads QC using CD4 T cell Monocyte Depletion Assay in BSL2 lab.
- Execute QC on Au beads using Scanning and Transmission Electron Microscopy (SEM) and Image J.
- Operate Flow cytometry and compare the results with point-of-care CD4 Test.
- Facilitate scale-up development and validation of high-volume manufacturing lines.
- Manage budget to ensure the lab has enough supplies and reagents.
- Execute research involving 5X scale up for Au Synthesis, CD4 beads, PLL-G-PEG.
- Train new employees on conjugation, lyophilization, and synthesis of microparticles and Au beads.
- Create the Batch Record, SOP, DOP, and FR.
- Generate Installation/Operation Qualification reports.
- Validate procedures and equipment.
- File deviation and NCR report.
- Practice cGMP, GLP and GDP, and train new staff in the procedures as well.
- Communicate with the vendor to inquire if the product is available and negotiate.

Thermo Fisher Scientific, Pleasanton, CA

Sr. Manufacturing Associate

Jan 2012 - July 2013

- Synthesize DNA and RNA with or without MOD using next-generation sequencing.
- Perform Ion-torrent (ion semiconductor) and Exome next generation sequencing.
- Measure eluate dimethoxytrityl protecting group concentration using spectrophotometer.
- Conduct post-synthesis diethylamine (DEA) treatment.
- Cleave and de-protect synthesized oligonucleotides through gas phase apparatus (GPA).
- Purify and remove salt from oligonucleotides through normal phase liquid chromatography columns.
- Perform Trityl-On and Trityl-Off purification based on reverse phase liquid chromatography and HPLC.

- Operate TECAN to generate Controlled Pore Glass (CPG) columns of different pore size.
- Train employees to operate lab equipment, operate tecan and synthesize Oligonucleotide.
- Reached the company goal of finishing a project within a year

Education

App Academy

Immersive software development course with focus on full stack web development.

July 2021 - present

University

University of California, Davis

Biological Science Degree with emphasis on medical microbiology

Aug 2008 - Dec 2012