

## Billy Lu

Full Stack Software Engineer

Orange County, CA | [billyfwlu@gmail.com](mailto:billyfwlu@gmail.com) | [GitHub](#) | [Portfolio](#) | [LinkedIn](#)

A results oriented software engineer with ten (10) years' experience in Medical Device engineering. I excel in fast-paced environments where I can hit the ground running. Strong critical thinker, data driven and risk-based problem solver, I implement effective solutions to complex problems drawing from an array of disciplines.

### SKILLS

- HTML, Javascript, React, Python
- CSS, Tailwind
- Express, EJS, APIs / Axios / Fetch
- NodeJS, NEXT.js, Postgres, MongoDB / Mongoose, SQL, Sequelize, VBA
- Project Management, Root Cause Analysis, Process Development / Validation, Test Method Development / Validation

### EXPERIENCE

#### **Software Engineering Immersive | General Assembly** | Remote

April 2022 – July 2022

Successfully completed 400+ hours of expert led instruction in Full Stack, RESTful APIs and hands-on learning of Software Engineering fundamentals and the industry's most in demand technologies. Developed projects, including:

- **GunShapes:**
  - Tanks/Gunbould inspired 2-Player Game using Javascript / CSS / HTML and Canvas
  - [\[GitHub Repository\]](#) [\[Deployed Link\]](#)
- **SousChefDobbie:**
  - Inspired by my passion for food and cooking, this site is meant to allow users to create and share recipes with the added benefit of showing the individual and aggregated nutritional information from the USDA API. Built with – Express, NodeJS, and Postgres / Sequelize. Coupled front end and back end with RESTful routing.
  - [\[GitHub Repository\]](#) [\[Deployed Link\]](#)
- **DelishaGram:**
  - Collaborative effort that planned and built an instagram-like web-based platform where you can create and share posts/food pictures powered by cloudinary. Built with MERN stack (MongoDB, Express, React, and Node.js) – Group Project with GA, decoupled front end back end with RESTful routing and custom API.
  - [\[GitHub Repository\]](#) [\[Deployed Link\]](#)
- **Ensemble-Closet:**
  - Collaborative effort that planned and built a fashion related web-based platform where you add articles of clothing to a digital closet for clothing tracking and outfit planning. Image upload functionality powered by cloudinary. Built with MERN stack – Group Project with GA, decoupled front end back end with RESTful routing and custom API.
  - [\[GitHub Repository\]](#) [\[Deployed Link\]](#)

#### **New World Medical** | Rancho Cucamonga, CA

March 2020 – April 2022

*Principal Quality Engineer, Design Assurance*

- Voluntarily resigned to pursue career transition to software development.
- Led a cross functional team of R&D, QC, and Sustaining to plan, develop and execute 23 Test Method Validations as required.

- Performed statistical analysis (T-test, ANOVA, Gage R&R, Normality Tests, Transformations, process capabilities) using Minitab to determine lot and validation acceptance as well as data analysis and interpretation to make data-informed decisions.
- Planned and managed 12+ US/OUS supplier qualifications which include supplier development, reviewing/approving of documentation and relevant validation activities.
- Reviewed and approved/rejected document submissions as part of document/process control to ensure sustainable/scalable processes are implemented while meeting best practices and compliance requirements.
- Rewrote process validation and test method validation procedures to clarify requirements and provide guidance on best practices.
- Mentored less experienced engineers and technicians and expanded their understanding of the quality systems to improve the application of theory with real world experience.

**Orchid Orthopedic Solutions** | Santa Ana, CA

May 2018 – March 2020

*Quality Engineer*

- Created and validated a VBA Macro to programmatically convert drawing specifications into inspection plans improving duration time from 6 hours per drawing to 1 hour per drawing, which results in increased throughput and estimated annual savings of \$90k+.
- Led the implementation of the AQPQ process, driving new projects through the phase-gate approach to systematically meet customer design requirements.
- Created and deployed a tool tracking software using MS Access that includes a decoupled frontend and backend system that allowed for user interface to read, create, modify and destroy different CNC machine tools. The front end and database was centralized on a shared drive with backend code based in VBA and MS power query. Also created an update program using excel VBA that will check access frontend with current local machine front-end client and force an update if different.

**Confluent Medical Technologies** | Laguna Niguel, CA

April 2014 – May 2018

*Quality Engineer*

- Automated monthly and quarterly quality metrics reporting by utilizing MS Excel (VBA) and MS PowerPoint to pull data from an access database and performing statistical analysis reducing processing time from 6 hours on a monthly/quarterly basis to less than 30 minutes.

## EDUCATION

- **Immersive Software Engineering Course** | *General Assembly* | Remote Completed 2022
- **Certified Quality Engineer (CQE)** | American Society for Quality (ASQ) Completed 2018
- **BS, Biomedical Engineering** | *California Polytechnic State University* | San Luis Obispo Graduated 2012