Henry J. Cabral

Senior Mechanical/Biomedical Engineer

Professional Experience

Development Manufacturing Engineer @ 3D Systems
April 2022 – Present |
Littleton, Colorado

- → Leads 3DP R&D automated dosing and agitation equipment development and implementation

Senior Engineer, Product Development (Contractor) @ Stryker
June 2021 – January 2022 |
Mahwah, NJ

- → Utilizes PTC Creo to produce surgical templates
- → Evaluates fit-for-use testing, conducts mechanical verification (transit/drop-vibration) testing, and user validation activities related to cases and trays.
- → Collaborates with internal stakeholders to ensure requirements outlined in engineering drawings are met.

Founder @ Enable Product Development, LLC.
January 2022 – Present
|Hillsborough, NJ

- → Developing mechanical designs for products to be manufactured using additive technologies (FDM/FFF, SLA/MSLA)
- → Evaluates designs using CAE/FEA software to maximize performance and mechanical integrity
- → Establishes relationships with start-up/small stage companies to create Minimal Viable Products (MVP)

Mechanical/Automation Engineer @ Aprecia
February 2019 – Present |
East Windsor, NJ

- → Leads 3DP R&D automated dosing and agitation equipment development and implementation
- → Sources/designs automated instruments (actuators, cylinders, infrared sensors, pneumatics, etc.) for R&D Manufacturing and Formulation
- → Developed key infrastructure for Next-Generation 3DP cGMP Pharmaceutical Manufacturing Equipment
- → Created/Executed URS, FAT and SAT for our cGMP pharmaceutical manufacturing equipment
- → Integrated, tested and validated important subsystems and entire manufacturing equipment (Validated 2 of our MFG Machines)
- → Inventor, Awareded 2 Patents

Production Engineer @ Getinge
January 2018 – February 2019 | Wayne, NJ

- → Executed/Coordinated Validation efforts for several cGMP manufacturing processes within two product lines (HemoPro and HemoPro 2)
- → Authored test protocols/reports for process validations (IQ, OQ, PQ, Design Verification)
- → Conducted Normality Testing, Process Capability Analysis for OQ/PQ Validation Efforts analysis using Minitab
- → Provided on-demand process equipment (on-the-floor engineering) support

Project Engineer @ Upstart
September 2016 – January 2018 | Newark, NJ

- → Created device housing and tooling using Solidworks which was implemented into medical device
- → Advanced a marketable device suitable of relieving muscle fatigue for orthopedic surgeons
- → Maintained relationship with suppliers to produce components essential to design requirements

Skills

Programming Languages
C++, Python, JavaScript (ES6), TypeScript, HTML/CSS

Libraries & Frameworks
React, Gatsby, Node.js, Express

Tools & Platforms Used
Git, Webpack, Netlify, Heroku, Firebase

Engineering Design & Tools
Design Controls, 3D Printing, Process Validation, Regulations (21 CFR 820, QSR, cGMP, ISO 13485), Rapid Prototyping, Mechanical Design, Product Development,

Certifications

Zero To Mastery Academy
Complete Python Developer in 2021
Finished in Oct 2020

Complete Web Developer in 2021
Finished in Feb 2021

JavaScript: The Advanced Concepts
Finished in Feb 2021

Complete React Developer in 2021
Finished in April 2021

Complete Machine Learning and Data Science
Finished in Nov 2020

Education

New Jersey Institute of Technology
Bachelor of Science in Biomedical Engineering
2013 – 2017 | Newark, NJ

Master of Science in Biomedical Engineering
2017 – 2018 | Newark, NJ