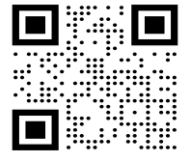


# Darian Abreu, Engineer-in-Training

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## EDUCATION

**University of Delaware**, Newark, DE

May 2017

*College of Engineering, Bachelor of Science*

Major: *Mechanical Engineering* | Minors: *Electrical and Computer Engineering & Mathematics*

**Cumulative GPA: 3.38 | Major GPA: 3.35**

Achievements or Awards: 1<sup>st</sup> Place Design (ADVIA 1800 Impeller Drive Mechanism), Benjamin E. Herring Scholarship, Dean's List (6 Semesters), Environmental Design Discipline Award (Undercarriage Decontamination System), Presidential Scholarship

### RELEVANT COURSE PROJECTS

**Undercarriage Decontamination System** – United States Department of Agriculture

- Developed an easy to build, cost-effective, open-source undercarriage decontamination system to disinfect vehicles and prevent disease outbreaks on small farms in the United States by reducing the viral load of a disease by at least 90%

**ADVIA 1800 Impeller Drive Mechanism** – Siemens Healthcare Diagnostics

- Redesigned Siemens' ADVIA 1800 Clinical System mechanism to allow adjustable horizontal and vertical positions of impeller
- Implemented spring-loaded mechanism with an injection-molded cam through testing using SolidWorks, to compose a cost-effective solution to previously fixed single-plane motion impeller capable of handling up to 1800 tests per hour

## EXPERIENCE

**Skyline Windows**, Hasbrouck Heights, New Jersey

July 2021 - Present

*Custom Production Supervisor*

*(previously) Manufacturing Engineer / July 2021 – March 2022*

- Analyzed shop drawings for design feasibility to generate factory order packages, material takeoffs, financial projections, estimates and processing documents for production using AutoCAD, Excel, PrefCAD, PrefWISE and PrefGEST (PrefSuite)
- Leveraged AutoCAD and Excel VBA to automate glass pricing, check inventory and create dynamic muntin details which lead to a 920% increase in gross profit of custom department in first year, responsible for 20% of overall company sales
- Reviewed and processed over 700 façade projects, including the Chrysler Building, Harvard, and One Wall Street
- Wrote extensive Visual C++ code for PrefGest to autonomously generate proper window hardware in production reports
- Organized OneNote manual for engineering team to constantly collaborate and standardize order entry with real-time updates
- Audited 180 phases of financial reports to determine \$600,000 budget discrepancy by defining an Excel VBA to expedite process

**Public Consulting Group**, Remote, New York

December 2020 - July 2021

*Contact Tracer*

- Designed and supervised spreadsheet for team to input, monitor and sort 2400 contacts by quarantine date using Excel
- Managed biweekly data entry of school exposure line lists of over 80 students and staff in liaison with specialist and supervisor
- Presented to 350 members of contact tracing initiative on effects of COVID-19 and reconciling a sustainable society
- Developed technical documentation, managed workflows, and provided training and support to more than 20 employees

**Frank's Drywall**, Rockland County, New York

June 2019 - November 2020

*Construction Manager*

- Refined more than 3 process improvements for first year, including compiling functions for Google Sheet to dynamically generate invoices or estimates and autonomously produce customer-email interaction with PDF attachment from Google Sheet

**Aquatectonic/Lothrop Associates LLP**, White Plains, New York

November 2017 - May 2019

*Design/Technical Engineer*

- Coordinated and interpreted multi-disciplinary drawings to create plans, sections, details, schedules, VFDs and P&ID diagrams for lap, leisure or cold plunge commercial pools, whirlpool spas, water features, steam rooms and saunas using AutoCAD, including 1<sup>st</sup> zero-entry steel construction wading pool at firm
- Prepared construction drawings for over 50 commercial pools, spas, steam rooms and water features; consolidated piping layout drawings, equipment specifications, mechanical equipment sizing, filtration system designs, utility requirements and hydraulic calculations to comply with state regulations and approval standards set by New York State Department of Health

## SKILLS

- Computer & Software:** Adobe Acrobat, Amazon Connect, Arduino, AutoCAD, Beamchek, Bluebeam Revu, Cambridge Engineering Selector, CommCare, Visual C++, Excel VBA, GitHub, HTML, JavaScript, Kofax Power PDF, LabVIEW, Linux, MATLAB, Microsoft Office, Microsoft Teams, PLC Programming, PrefSuite: (CAD, Gest, Wise), Python, Revit, SolidWorks, SolidWorks FEA, SQL
- Languages & Communication:** Bilingual in Spanish (Reading, Writing and Speaking), Excellent Verbal, Written and Analytical Skills
- Machining Tools:** Milling Machines, Computerized Numerical Control (CNC), Lathes, Band Saws, Table Saws, Drill Presses, Calipers

## ACHIEVEMENTS & COMMUNITY INVOLVEMENT

**Engineer-in-Training**, State of New York, Certification #1716704

June 2018 - Present

**American Society of Mechanical Engineers**, Member

September 2015 - Present

**American Cancer Society**, Volunteer

September 2014 - Present