



EXPERIENCE

Philadelphia, PA
August 2012 - May 2014

GRADUATE RESEARCH ASSISTANT: PHILADELPHIA UNIVERSITY

Lab assistant and primary operator of the Thermal Manikin at the Philadelphia University Research Center.

- Designed and conducted experiments to test thermal performance of garments for commercial and military research contracts.
- Received 1st Place in the Industrial/Technical/Sports Materials category of the 2013 AATCC Student Poster Competition for research entitled: "Effect of Commercial Screen Printing Ink on the Thermal Performance of Running Shirts"
- Performed maintenance procedures and troubleshooting of equipment.

Philadelphia, PA
June 2013 - Nov 2013

PRODUCT DESIGN ENGINEER: SELF EMPLOYED

Freelance product design, development, engineering, and research for multiple clients.

- Designed installation tool concept to enable **Smart Wire Grid** to deploy their technology in emerging markets.
- Detailed CAD development of a dry-goods measuring dispenser and market research for **Fox Run Brands**.
- Created flexible studio space and developed low-budget learning furniture for **Philadelphia University** MSID Program.

Ivyland, PA
Mar 2013 - June 2013

INDUSTRIAL DESIGN INTERN: FOX RUN BRANDS

Part-time kitchen accessory product design internship.

- Conceptual sketching, market research, and initial CAD development of multiple kitchen accessory designs.

Ridley Park, PA
Mar 2012 - Aug 2012

STRUCTURAL DESIGN ENGINEER: THE BOEING COMPANY

6 month contract: Product lifecycle management for aft fuselage sections of the 787 Dreamliner.

- CAD design modification and part change documentation using Catia V5/Enovia.

Rockledge, FL
Feb 2011 - Feb 2012

VEHICLE ENGINEER: RIVIAN AUTOMOTIVE

Vehicle architecture design of a moderately priced, fuel efficient, driving performance oriented sports-coupe.

- Responsible for initial integration and specification of all vehicle systems using Catia V5.
- Co-Inventor on patented vehicle architecture:

US Patent 8,641,133 B1 "High Strength Lightweight Vehicle and Improved Method For Producing Same"

- Developed technical renderings and videos for investor presentations and public-relations material.

Rockledge, FL
Jan 2009 - Jan 2011

MECHANICAL ENGINEER: MAINSTREAM ENGINEERING

Design of a 1.26 L, 3-cylinder, turbo-diesel engine for use in lightweight military generator and commercial vehicle applications.

- Responsible for complete engine block design and drawing package using Autodesk Inventor 2011
- Designed ancillary engine components – Chain Drive System, Covers and released drawings.
- Performed finite element analysis to validate design decisions using Ansys Workbench.

Schenectady, NY
May 2008 - Dec 2008

ENGINEERING INTERN: GE ENERGY

Coded & released steam turbine brush seal performance calculator tool written in C# to enable rapid quote package development.

St. Louis, MO
Jan 2006 - Aug 2007

ENGINEERING CO-OP: THE BOEING COMPANY

Three engineering internship positions: Operations Analysis, Test & Evaluation, Mechanical Design Engineering

EDUCATION

Philadelphia, PA
May 2014

M.S. INDUSTRIAL DESIGN: PHILADELPHIA UNIVERSITY

Awarded Full Graduate Assistanship

Troy, NY
Dec 2008

B.S. AERONAUTICAL-MECHANICAL ENGINEERING (DUAL): RENSSELAER POLYTECHNIC INSTITUTE

Graduated Magna-Cum Laude

SKILLS

Design & Engineering

Engineering hand calculation, FEA, design drawings, design for manufacture, hand sketching, concept generation, user centered research, prototyping (wood, metal, electronics), rapid prototyping (CNC, fused deposition)

Software

Solidworks, Catia V5, Autodesk Inventor, Keyshot 3, Adobe Suite (Photoshop, Illustrator, InDesign), MS Office (Word, Powerpoint, Excel), Coding Languages (Processing, Arduino, Javascript, HTML + CSS, C)