

Carder Carson House

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Full Portfolio at www.carderhouse.com

Education	University of Pennsylvania, School of Engineering and Applied Science May 2016 Bachelor of Science in Engineering in Mechanical Engineering and Applied Mechanics Cumulative GPA: 3.55/4.00 Specialized Coursework: Machine Design and Manufacturing, Fluid Dynamics, Heat and Mass Transfer, Vibrations of Mechanical Systems, Intro Robotics, Integrated CAD/CAM/CAE, Mechatronics, Ergonomics/Human Factors in Product Design, and Tribology
Work Experience	MEAM Department, TA: Intro to Mechanical Design, University of Pennsylvania Jan. 2016- Present • Taught design processes, CAD, drafting and prototyping to section of 18 students in studio style course • Graded assignments and projects for 90 person class with 5 other TAs Precision Machining Laboratory, Shop Assistant, University of Pennsylvania June 2014-Present • Assisted 35 students per semester with design for machinability and machining efficiently • Mass manufactured parts for mechanical engineering courses • Enforced safety protocols and maintain shop cleanliness William's Café, Head Stocking Associate, University of Pennsylvania Sep. 2013-Present • Trained new stockers and ensured a high level of performance amongst all stockers • Served coffee and pastries to approximately 900 customers a week.
Research Experience	MEAM Department, University of Pennsylvania Summer 2015 The Herbert J. and Selma W. Bernstein Class of 1945 Internship • Independently developed passive, vibration eliminating eating utensil for people with hand tremors • Optimized invention's vibration damping efficiency using Lagrangian vibration analysis in Matlab • Designed and manufactured three distinct implementations of invented mechanism • Conducted consumer testing to determine most successful implementation for different tremors • Submitted Invention Disclosure to Penn Center for Innovation, in process of patenting device Volunteer Intern, Molecular Diagnostics Lab June 2011 – Aug. 2011 Le Bonheur Children's Research Hospital, Memphis, TN • Helped develop viral quantification standards for HSV Encephalitis in neonates • Co-authored study on effect of traumatic lumbar puncture on diagnostic testing
Leadership	Front Row Theatre Company, University of Pennsylvania Chair (April 2015-Present), Treasurer (2014-2015), Technical Director (2013-2014) • Lead 9 person board of student theater company performing socially relevant theater • Mentored producers for 3 shows and produced 1 show, averaging 10 volunteer hrs/wk • Collaborated with rest of executive board to choose shows and directors Set Designer/ Master Scenic Carpenter, Various Student Theatre Groups Sep. 2012 – Feb. 2015 • Designed and fabricated sets for 11 shows with budgets under \$500 • Lead four to ten person crews in constructing sets in less than one month
Skills	3D Modeling and Graphics: SolidWorks, CATIA, some Rhino, KeyShot, AutoCad, SketchUp, SketchBook Pro, Adobe Illustrator and Photoshop, Inkscape Prototyping and Manufacturing: Laser-cutting, 3D printing, manual and CNC milling and turning, SolidCAM, soldering, circuit prototyping, woodworking, thermoforming, silicone molding Programming and FEA: Matlab, Comsol, Java, OCaml, C
Interests	Backpacking, scuba diving, skiing, nature photography, cooking, carpentry