

Alex J. Doe

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EDUCATION	University of Pennsylvania , School of Engineering & Applied Science, Philadelphia, PA <i>Master of Science in Engineering in Mechanical Engineering & Applied Mechanics</i> , GPA: 3.56/4.00 Duke University – Durham, NC <i>Bachelor of Science in Engineering, dual major in Mechanical Engineering & Mathematics</i>	May 202x June 201x
SKILLS	Programming Languages: MATLAB, Python, C/C++, Fortran, MPI, Java, Tcl Software: Mathematica, FUN3D (CFD), Simulink, Pointwise, High-Performance Computing, TecPlot, Linux, Google Earth KMLs, SolidWorks, ANSYS Fluent, COMSOL, XFOIL, LabVIEW Fabrication: Composites, Industrial Fabrication, Plasma Cutting, Oxy-Acetylene Cutting, CNC Milling, Laser Cutting, 3D Printing	
RELEVANT COURSES	Robotics and Automation, Control Systems Design, Machine Perception, Machine Learning, Robotics, Vision and Learning, Hybrid Systems, Motion Planning, Mechatronics, and Bio-mechanics	
ENGINEERING EXPERIENCE	ROBOT CENTRAL – San Francisco, CA <i>Mechanical Engineering Intern</i> <ul style="list-style-type: none">Developed C++ microcontroller interface to enhance research efficiencyIncreased accuracy of pressure sensing in experimental trials by incorporating unidirectional sensorIntegrated and tuned new PID speed controller to improve testing frameworkDesigned proprietary new feature for Cleaning Development Team to reduce COGS, increase IEC benchmark performance, and improve consumer experience SMITH LABORATORY - Atlanta, GA <i>Engineering Intern</i> <ul style="list-style-type: none">Designed, implemented, tested, and documented automation routine for manufacture of measurement toolUsed Simulink to generate HDL code to run on FPGA, with the purpose of testing and documenting intricacies and limitations of data transfer between an FPGA and ARM processor BIG ROBOTICS – Austin, TX <i>Robotics Intern</i> <ul style="list-style-type: none">Contributed to entire product development lifecycle, including planning, design, prototyping, testing and iterating, of new class of chemically inspired robotic actuators for medical devices and food handling automationDeveloped detailed test plans and product evaluation tools as a member of the R&D groupAnalyzed test results to generate design changes and increase longevity of actuators by 1M cycles	May 202x – August 202x June 202x – August 202x June 202x – August 202x
PROJECTS	Penn Medicine SafeDrain Device , U. of Penn. Fall 202x (Team of 2) <ul style="list-style-type: none">Design, model, and 3-D print prototype of medical device that adds safety and comfort to surgical drains in consultation and collaboration with Penn Medicine physicians Vertical Axis Wind Turbine, Mechanical Engineering Lab , U. of Penn. Fall 202x <ul style="list-style-type: none">Designed and built functional wind turbine; conducted various tests to find optimal blade dimensions, gear ratio, and shape of blades Stirling Engine Machine Design and Manufacturing , Duke University Spring 201x <ul style="list-style-type: none">Designed and manufactured fully functional Gamma-Type Stirling Engine using aluminum Structural Analysis of Apartment Building Fire Escape , Duke University Fall 201x <ul style="list-style-type: none">Used SolidWorks to create CAD model of fire escape and performed and implemented FEA analysis to find maximum safe loads Balloon Design Competition , Duke University Spring 2016 (Team of 4) <ul style="list-style-type: none">Modeled system on MatLab, constructed 1.8m diameter balloon; awarded 2nd place after maximizing balloon flight time without breaching previously unknown height limits Dissect Mechanical Design , Duke University Spring 201x <ul style="list-style-type: none">Reverse engineered RC helicopter. Modeled working version of helicopter on SolidWorks.	
ACTIVITIES	Graduate and Professional Student Association Vice-President (201x-202x); Society of Women Engineers	