

Adolfo Tec

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EDUCATION	University of California, Berkeley Bachelor of Science, Mechanical Engineering (GPA: 3.16) Coursework: Dynamic Feedback Control Systems, Microprocessor-Based Mechanical Systems, Rigid Body Dynamics, Lagrangian Mechanics, Continuum Mechanics, Advanced Engineering Graphics, Measurement and Instrumentation, Manufacturing and Tolerance	Berkeley, CA Dec. 2017
	Cypress College Pre-Engineering Coursework - Transfer (GPA: 3.83)	Cypress, CA June 2013 - June 2015
SKILLS	<i>Software/Programming:</i> PTC Creo/Pro-E, SolidWorks, AutoCAD, Autodesk 3DS Max, MATLAB, Simulink, LabVIEW, C++, Arduino, Visual Studio, MS Office <i>Equipment:</i> 3-axis Mill, Lathe, 3D Printer, Laser Cutter, CFRP (Carbon Fiber Reinforced Polymer) Fabrication, Electronics <i>Languages:</i> Spanish, French	
EXPERIENCE	<i>Undergraduate Research Assistant</i> Human-Assistive Robotic Technologies/Mechanical Systems Control Lab <ul style="list-style-type: none">Conducted research on the efficacy of active-passive exoskeletons to be used for upper limb assistance.Performed system identification and developed mathematical models for stiffness control of pneumatics experiment.Fabricated circuit boards for actuating test rig and performing data acquisition.	Oct. 2016 - July 2017
	<i>Suspension/Drivetrain Member</i> UC Berkeley Human Powered Vehicle Team <ul style="list-style-type: none">Collaborated with a multidisciplinary engineering team to secure 4th place Overall and 2nd place in Innovation for the ASME HPV Challenge.Partnered with suspension and drivetrain sub-teams to design and manufacture a compact four-bar suspension system enclosed inside the steering knuckle.Consulted for creating realistic finite element simulations for suspension components.Assisted in fabrication of carbon fiber frame and fairing using a wet layup process.	Feb. 2016 - Dec. 2017
PROJECTS	<i>Case Steam Traction Engine Animation</i> <ul style="list-style-type: none">Created a CAD animation to accurately depict the assembly and mechanics behind a CASE steam traction engine using 3DS Max and Adobe After Effects.Modeled 50 unique parts along with all material properties for rendering production in PTC Creo.	Oct. 2017 - Dec. 2017
	<i>Siesta Drink Dispenser</i> <ul style="list-style-type: none">Collaborated in a team of five to create a smart drink dispenser and secure the Frank Jarrett Prize for the department's most outstanding project in machine design.Responsible for writing volume control for an array of diaphragm pumps and temperature control for a heating element.Manufactured the final product using bending machines, mills, and water jets.	Aug. 2017 - Dec. 2017
	<i>Inverted Pendulum and Magnetic Levitation Controllers</i> <ul style="list-style-type: none">Developed equations of motion for a rectilinear dynamic cart and pendulum system and ran simulations in Simulink.Designed and implemented a state feedback controller to stabilize and self erect an inverted pendulum capable of disturbance rejection.Implemented and tuned an analog lead-compensator to levitate a metallic ball.	Aug. 2016 - Dec. 2016