**Ryan M. Kissinger**

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**Mechanical Design, Development, Testing, Documentation**

**Profile**

Mechanical Engineer with academic background in the application of theory and simulations used in planning, designing, developing, testing, and validating mechanical systems. Original thinker and process-minded coupled with a creative artistic flair fostering innovation. Effective as a team member and at working independently on multiple projects. Inspired problem solver using good judgment in decision making ensuring successful outcomes. Excellent oral, written, and presentation skills used in clear communications in both technical and non-technical environments. BSME 2019; GPA: 3.28. Passed the NCEES Fundamentals of Engineering (FE) Exam.

**Summary of Experience/Education**

|  |  |  |
| --- | --- | --- |
| * Standard principles & theories | * Planning & Design | * Project Management |
| * 3D Modeling | * Development & Testing | * Technical Documentation |

**Curriculum Completed**

|  |  |  |  |
| --- | --- | --- | --- |
| • Intermediate Dynamics | • Design/Materials | • Fluid Mechanics | • Control/Thermo Systems Design |
| • Solid Modeling | • Systems/Heat Transfer/Thermo | • Mechanical Vibrations | • Mechatronics |

**Academic Project & Work Experience**

**FLIR (Forward-Looking Infrared), Goleta CA, *Neural Network Data Acquisition*** **5/2019-present**

* Operated FLIR thermal camera collecting images to aid in building Convolutional Neural Net
* Analyzed and selected up to 300 photos per session distinguished by best object heat signatures
* Configured and programmed microcontroller enabling evaluation of heat signature captures

**Senior Project-Ember, Cal Poly, Co-*Project Manager*** **1/2019-present**

* Conceptualized and completed design process incorporating CAD for autonomous fire protection robot.
* Designed full system in CAD, selected all parts, and generated drawings for manufacturing feasibility
* Collaborated with 4 engineers in design process utilizing mechatronics ensuring success for in-home use
* Programmed microcontroller enabling interface with camera and motor
* Recognized for successful cutting-edge project in the media <https://keyt.com/news/san-luis-obispo-county/2019/11/23/cal-poly-students-engineer-robot-to-help-fight-wildfires/>

**Quality of Life-Midas Project, Cal Poly, *Project Team Lead*** **9/2018-6/2019**

* Designed fully functional mechatronics left hand prototype for 10-year-old car accident victim enabling complete use of hand
* Managed project including design, fabrication, and trained 7 team members in SolidWorks ensuring design principles and delivery requirements were met; mission success
* Collaborated with electrical and biomedical engineers delivering operative left and right hand in perfect working condition on-time and within budget
* Recognized for successful cutting-edge project in the media <https://www.latimes.com/local/abcarian/la-me-abcarian-julian-20190604-story.html>

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**Entrepreneurial Project,Cal Poly Hatchery*, Project Manager/Mechanical Engineer*** **8/2017-6/2018**

* Designed, modeled, and selected components for sport bottle with mechanical supplement delivery system
* Fabricated and currently testing 2 prototypes with provisional patent pending

**Quality of Life-ALPS Project, Cal Poly, *Project Manager* 4/2018-6/2018**

* Selected as project leader and managed 3 teams in analysis and redesign of adaptable athletic-use prosthesis
* Corrected faulty run/swim transitional mechanism through in-depth analysis, design, modeling, and testing
* Incorporated 3D modeling, development, and testing for buoyancy reduction, drag improvement, and completed project on-schedule in 6 weeks

**Modular Automation Project, Sigma Phi Delta Cal Poly, *Lead Mechanical Engineer*** **3/2017-7/2017**

* Designed and drafted robot arm mechanical system and acted as project lead engineer
* Collaborated with electrical, computer, mechanical, and computer science engineers producing robotic arm with Arduino microcontrollers

**Office Max/Chili’s Bar and Grill – Denver, CO** **6/2015-8/2017 & 6/2014-12/2015**

**Technical Skills**

|  |  |  |
| --- | --- | --- |
| * Solidworks, Blender, AutoCAD, FEA | * Simulink | * MATLAB, HTML, C, Unix, CSS |
| * Milling, welding, lathe work | * GTAW, SMAW | * Microsoft Office Suite, Windows, iOS |

**Education**

**California Polytechnic State University - San Luis Obispo, CA 11/2015-12/2019**

Bachelor of Science in Mechanical Engineering Concentration: Mechatronics GPA: 3.28

**Certifications**

**NCEES Fundamentals of Engineering (FE) Exam: Passed 11/2019**

Passed exam, gaining NCEES FE certification

**Affiliations, Leadership & Awards**

• American Society of Mechanical Engineers • Sertoma Freedom Essay Winner – *What Freedom Means to Me* •

• Sigma Phi Delta, Past Social Chair, Rush Chair, Class President • Welcome Week, Orientation Leader •

• Future Business Leaders of America, Past Vice President and three-time Colorado award recipient **•**