JOE KARAM

| LinkedIn | GitHub | ☎ +1 (530) 636-3701 | ✉ joeekaramm@outlook.com | Portfolio |

EDUCATION

The Pennsylvania State University *August 2022*
Masters of Engineering in *Engineering Design*

California State University – Chico *Jan 2019 – May 2021*
Bachelor of Science in *Mechanical Engineering*

Lebanese American University – Byblos (Lebanon) *Aug 2015 – Dec 2018*
Course Emphasis in *Mechanical Engineering*

PROFESSIONAL EXPERIENCE

Undergraduate Research Assistant *Mar 2020 – Dec 2020*
California State University - Chico *Chico, CA*
- Research on the design exploration of indoor agricultural systems
- Assisted the faculty in executing algorithms and evaluation of the data

Control Systems Design Grader *Oct 2020 – Dec 2020*
California State University – Chico *Chico, CA*
- Evaluated student assignments related to this course
- Contributed in various tasks throughout the semester

Industrial Internship *Jul 2019 – Aug 2019*
Phoenix Machinery s.a.l *Tabarja, Lebanon*
- Modeled a firefighting hydrant system for Phoenix's plant
- Assisted in HVAC and plumbing projects for industrial applications
- Enhanced my skillset in "Elite Fire Software" and "AutoCAD"

Industrial Training *Jun 2018 – Aug 2018*
Interstate Inks (Member of INDEVCO group) *Hosrayel, Lebanon*
- Visualized and optimized cutting costs methods with the Financial Office
- Dealt with various customers and learned production processes

PROJECTS

Compliant and Intelligent Grasping with Parallel Kinematic Mechanism and its Agricultural Application
- Design and dynamic analysis of the chassis
- Creation of a digital twin in CoppeliaSim for the whole system
- Budget Analysis and optimization for the whole project

Robotic Collaboration for Timber Construction (MECA-470 Robotics Engineering Project)
- Design and analysis of a 17 Degree of Freedom system based on ETH Zurich's work
- Developing an Algorithm on grasshopper (CAD, Rhino with GH)
- Algorithm implementation in CoppeliaSim (formerly known as V-Rep)

Design Exploration for Indoor Agricultural System (Summer 2020 Research)
- Geometrical simplification of various plant's geometry (3D convex hull)
- Geometrical optimization (light, reachability) for plant's placement

Screw Tightening/Loosening Machine
- Design and implementation of automated screw tightening/loosening machine
- Programming was done using Sysmac studios

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LEADERSHIP ACTIVITIES

- NCBBA Basketball player on Chico State's Basketball team *Jan 2019 – Dec 2019*
- Division 2 National Basketball player in Lebanon *2016/2021*
- Basketball coach at l'ile o zenfants *Jun 2017 – Aug 2017*

CERTIFICATIONS

- LI Learning: MATLAB 2018 Essential Training
- LI Learning: Generative Design Foundations
- LI Learning: Introducing Rhino
- LI Learning: Learning Grasshopper
- LI Learning: Python Essential Training
- LI Learning: Learning GitHub
- LI Learning: Git Essential Training: The Basics
- LI Learning: SOLIDWORKS Simulation: Dynamic Analysis
- LI Learning: SOLIDWORKS: Advanced Simulation
- LI Learning: Learning Siemens NX
- Lynda: Programming Foundations: Fundamentals (2011)

CORE TECHNICAL SKILLS

Languages: English (Fluent), French (Fluent), Arabic (Native)

Software: Rhino 6.0 (with Grasshopper), SolidWorks, CoppeliaSim (former V-Rep), Siemens NX, Robo DK 5.0, ROS 1.0, NI LabView 2019, Omron ACE 4.0, Meshmixer

Languages: Python, MATLAB

Employability Status:
Lebanese Citizen