

Kulvir Singh Jandir

kulvirjandir@gmail.com | Milpitas, CA - (408) 410-3048 | www.kulvirjandir.com

PROFILE

Design focused mechanical engineer with a strong desire to engineer innovative products and gain experience. Skilled in designing products to meet packaging, structural, and manufacturing feasibility requirements. Experienced in team management and interpersonal communication within cross functional teams to accomplish goals. **RELEVANT**

KNOWLEDGE, SKILLS, AND TRAINING

SolidWorks Mechanical Design GD&T Manual/CNC machining MIG/TIG Welding 3D Printing Reverse Engineering Finite Element Analysis DFM CAM Fixture Design Mechatronics & Lab Equipment Vehicle Dynamics Heat Transfer

EDUCATION

Major: Bachelor of Science in **Mechanical Engineering** 2018, University of California Davis, Davis, CA (GPA 3.45)

WORK EXPERIENCE

Rapid Robotics, San Francisco, CA JAN 2022 – MAY 2023 *Field Application Engineer*

- Designed and built grippers, fixtures, and safety devices for automation projects involving robotic arms.
- Created automation work flow plans and programmed robotic arms.
- Diagnosed and solved problems in existing automation by implementing improved mechanical solutions and code.
- Performed end to end automation design and deployment.

GM Nameplate, San Jose, CA DEC 2020 – DEC 2021 *Manufacturing Engineer*

- Fully designed and manufactured a pneumatic label punching machine to reduce manual labor and punch parts 22 times faster.
- Used SolidWorks to design a manual press, which reduces small repetitive hand motions from the labor team and increases efficiency.
- Designed and manufactured a large sheet cutting machine which increased efficiency 300% and eliminated hard labor.
- Working on a robotic arm to automate the sheet loading process.
- Working within a rapid proto team to design and manufacture prototypes to clients in order to solve problems quickly.

Specialized Bicycle Components, Morgan Hill, CA MAR 2020 – JUL 2020 *Associate Engineer*

- Used Catia to design test setups/jigs for component and frame level testing.
- Ran tests on various components and frames in order to validate them.
- Machined test setup equipment on manual mills.

General Motors Pontiac, MI Feb 2019 – Nov 2019 *Electric Drive Unit Validation Engineer*

- Planned and led corrosion testing on electric drive units to validate directionally correct designs.
- Coordinated across cross functional teams to efficiently build and rebuild electric drive units.
- Worked with design release engineers and materials specialist to root cause failures and implement solutions.

FSAE Race Car Drivetrain, University of California, Davis, CA Jul 2017 – Jun 2018 *Drivetrain Team Leader*

- Used SolidWorks to design parts and perform FEA to produce a light, strong, and easily serviceable drivetrain system.
- Collaborated with subteams to design around tight packaging and managed a group of 5 to utilize a diverse skillset.
- Machined all drivetrain parts and fixtures using Fusion 360 generated CAM and Bridgeport CNC mills.
- Produced an award-winning electric racecar which competed in the international FSAE competition in Lincoln, Nebraska.

Linear Technology Corporation Milpitas, CA Jul 2016- Sep 2016 *Associate Design Engineer Intern*

- Designed and manufactured test boards with Proteus and a CNC router for engineers to develop and validate op amps.
- Developed excellent skills in trouble shooting electrical circuits and devising solutions in a fast-paced work environment.
- Utilized interpersonal skills to coordinate between suppliers, technicians, and engineers to meet delivery deadlines.

RELEVANT EXPERIENCE

Diesel Powered 1953 Willy's Jeep, Milpitas, CA May 2020 – Current Personal Project: *Mechanical Design & Fabrication*

- Designed and built a 1953 Willy's Jeep with a goal to be simplistic, reliable, and powerful.
- Sourced parts from multiple vehicle OEM and aftermarket manufacturers to upgrade/rebuild every system of the vehicle.
- Fabricated custom parts using TIG/MIG welders, angle grinder, and basic hand tools.
- Designed parts using SolidWorks and analog methods.
- Budgeted using Microsoft Excel to ensure actual benefits are in line with cost in money, time and human resources.

External Bone Fixator Hinge, University of California, Davis, CA Jan 2018 – Jun 2018 Senior Design Project: *Mechanical Design Engineer and Manufacturing Lead*

- Worked with the UC Davis Veterinary Center to engineer a biomedical hinge to correct for bone deformities in dogs.
- Budgeted using Gantt Chart and BOM to ensure actual benefits are in line with cost in money, time and human resources.
- Performed FEA and design optimization using SolidWorks to design an easily manufacturable, robust, and simple product.
- CNC Machined 4 sets of hinges out of 316L Stainless Steel which surpassed all industry standards in testing.

Shingley Book Hauler Gear Box, University of California, Davis, CA Jan 2018 – Apr 2018 Mechanical Design Project: *Team Leader*

- Completely designed, manufactured, and tested a gear box to quickly haul loads (4-26lbs) at various ramp angles.
- Coordinated a team of five through scheduling and leveraging one's strengths in the engineering process to deliver.
- Successfully produced a gearbox which came 2nd place amongst 10 teams in a competition of speed.

Motorized Bicycle, Milpitas, CA Jan 2014 – Sep 2017 Personal: *Mechanical Design Project & Hands-On Machining*

- Designed and built an alternative transportation device from scrap farm equipment and bicycles.
- Enhanced hands-on skills implementing research and planning with MIG welding and metal workshop machinery.
- Completely redesigned the drivetrain after evaluating test results to reduce noise, vibration, and spin loss.