Tyler Kiefer

Colorado   tylerkiefer.com

Summary

Self-driven, detail-oriented, and adaptable engineer with 14 years of experience leading, designing, analyzing, and testing new technologies for custom applications. Works closely with customers, presenting and gaining feedback of project designs and key milestones. Optimistic outlook towards meeting and overcoming challenges.

Skills

Leadership & Management: Agile Project Management, Kanban Framework, Conflict Resolution, Growth Team Mindset

Languages & Frameworks: Python, C, HTML, CSS, Javascript, YAML, Mocha

Certifications

CompTIA **Security+**

Professional Experience

Kiefer Engineering, Inc.   Colorado Springs, CO
Owner / Engineer   *Feb 2022 – Present*

- Consult for multiple clients on a wide range of projects spanning lithium battery systems to heavy machinery and created successful, continuous relationships with clients to yield repeat customers.

- Manage full project workflow from initial specifications and SOW (scope of work) documentation including engineering manpower estimates, through architecture planning, concept generation, CAD design and Finite Element Analysis (FEA), concluding with preparing technical deliverables such as engineering drawings and documentation to efficiently communicate design intent to manufacturing.

- Utilize a hybrid approach of Waterfall and Agile project management frameworks to optimize design timeline and provide efficient communication and feedback to and from clients. Employ Kanban and Gantt charts to effectively manage and track task progress and assignments among team members.

- Wrote Python code to simulate articulation of boom arms and suspension height of autonomous agricultural sprayer machine to save design time of kinematic layout and optimize lengths of linkages.

Stewart & Stevenson (formerly Voltabox)   Austin, TX
Senior Mechanical Engineer   *Jan 2020 – Feb 2022*

- Improved C code for BMS of solar storage lithium battery solution to reduce memory footprint by utilizing memory pointers for data structures.

- Directed and collaborated with team of engineers on design of 10,000 V / 2,880 kWh lithium battery energy storage system (ESS).

- Agile focused project management; led projects through concept, prototype, testing, and production phases. Achieved excellent on-time deliverable rate to customers.

- Championed integrating safety mechanisms into module designs and assembly processes to reduce electrical short incidents which resulted in improved safety and increased quality during assembly.

- Organized UN 38.3 standard testing plan to meet lithium battery transportation requirements on U.S. roadways as well as collaborated with testing facility to design equipment to facilitate tests.

DJH Engineering Center, Inc.   Salt Lake City, UT
Mechanical Design Engineer   *2012 – December 2019*

- Consulted by John Deere on new machine designs for combine harvesters, cotton harvesters, and large tractors. Responsible for full design of critical systems and functional areas from ground-up concept, through prototype builds, testing, and into production. Managed team of 8+ engineers to efficiently bring projects from concept and CAD models to deliverable engineering drawings and documentation.

- Selected to join urgent task force to improve engine cooling package debris mitigation to solve cooling performance issues that were identified during field testing. Employed FEA and computational fluid dynamics (CFD) to verify design changes. Successfully achieved improved engine cooling.

- Commended for my contributions to DJH Engineering winning the prestigious John Deere Supplier of the Year Award four times during my tenure.

Lynntech, Inc.   College Station, TX
Product Development Engineer   *2010 – 2012*

- Researched, brainstormed and generated concepts for contract proposals for U.S. DoD, DoT SBIR projects.

- Organized communication between engineering, scientist, and quality assurance (QA) teams. Led multi-team meetings and presented benefits of design trade-offs necessary to meet all stake-holder's requirements.

- Created M & G-code; Programmed and operated computer numerical control (CNC) mills and lathes to manufacture parts.

Personal Projects

- 24/7 Proxmox home server running multiple virtualized operating systems.

- Debian Linux VM running Samba file server, multiple Docker containers including Rustdesk, Frigate, Syncthing and others.

- Implemented Home Assistant open source smart home platform integrating dozens of household devices as well as custom programmed automations.

- Integrated Frigate NVR utilizing AI-driven vehicle and person detection to trigger smart phone notifications.

Education

Michigan Technological University   Houghton, MI
BS – Mechanical Engineering   *2010*

Codecademy
C, Python, Full Stack   *Present*