

DUSTIN J. KEELING

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DESIGN ENGINEER | FRONTEND & SYSTEMS SPECIALIST

High-precision engineer with 10+ years of experience closing the gap between complex system architecture and user-centric interfaces. Expert in developing full-stack software solutions (Python, FastAPI, [Node.js](#), React, Tailwind) and industrial automation workflows. Proven track record of taking products from conceptual Figma/CAD prototypes to production-ready products. Passionate about building performant, accessible UI and reusable component libraries that scale.

TECHNICAL SKILLS:

Domain	Software & Tools	Methodologies
Frontend & Design	React, Next.js, Tailwind CSS, Framer Motion, shadcn/ui	Responsive Design, Figma-to-Code, UI Precision, Micro-interactions
Backend & Automation	Python (FastAPI/Flask), SQL (PostgreSQL/SQLite), Node.js	REST APIs, Automation Workflows, Database Architecture
Systems Engineering	Version Control (Git), Linux Server Admin, CI/CD	Component-Driven Architecture, Rapid Prototyping (Digital & Physical)
Legacy Hardware	SolidWorks, PTC Creo, 3D Printing (FDM/Slicing)	Precision Tooling, NPI, Poka-Yoke (Error-Proofing)

SELECT CAREER HIGHLIGHTS

- **Custom Inventory Management Suite:** Developed a separate frontend/backend architecture using FastAPI and SQL. Managed the full lifecycle from GUI design to database migration.
- **Responsive Geolocation Platform:** Built a web application incorporating Leaflet.js and PostgreSQL to manage real-time location data and user interactions.
- **Built a Python vision system and 3D-printed housing to automate sprue removal checks.** This replaced a 100% manual inspection with robotic sorting, cutting the operator's workload by 70% and stopping defects that were previously missed due to complacency.
- **Prototyped and launched a 3D-printed sensor housing that improved GPS data accuracy by 30% for elite athlete tracking.** This design fix directly enabled the client to scale their product into approximately 45 collegiate athletic programs across the US.
- **Contributed to development of an electric actuator control for UTV/ATV attachments, eliminating the need for manual height adjustments.** The design enabled "on-the-fly" adjustment from the cab and was retrofittable to existing units, helping the company become an early market leader with this technology.

BLUEOVAL SK - GLENDALE KY

2024-PRESENT

MANUFACTURING / PROCESS ENGINEER

- Developed specialized Python scripts to bridge data gaps between Manufacturing Execution Systems (MES) and engineering teams, eliminating 75+ minutes of manual entry per shift.
- Partnered with production and technical teams to develop and document iterative processes for large-scale battery cell manufacturing.
- Prototyped and deployed high-precision jigs for microscope inspections, utilizing rapid prototyping to cut setup times by 50%.

NIFCO/KTW - TOCCOA GA

2022-2024

MANUFACTURING ENGINEER

- Designed Poka-Yoke assembly fixture for BMW air vents, reducing scrap by 15%
- Cut manual inspection by 70% using a vision system to catch defective injection-molded parts
- Conducted weekly 5S audits and held monthly meetings with auditors to discuss improvements

EATON AEROSPACE - TOCCOA GA

2018-2021

ASSOCIATE ENGINEER

- Designed and implemented a Python/SQL-based tracking system for CNC assets, replacing unreliable manual logs with a real-time, searchable database.
- Refined Mastercam logic and automated tooling workflows to reduce cycle times by 10% across high-priority aerospace components.

DIRT DOG MANUFACTURING - COMMERCE GA

2017-2017

PROJECT MANAGEMENT / DESIGN

- Engineered a retrofittable electric control for UTV attachments, eliminating manual height adjustments
- Managed the design of precision welding fixtures, reducing assembly rework through improved part repeatability

SAVAGE INNOVATIONS LLC - TOCCOA GA

2015-PRESENT

Co-OWNER / PRODUCT DESIGN

- Full-Stack Web Development and maintained company web infrastructure using React, Tailwind, and Framer Motion, focusing on high-performance motion and responsive layouts.
- Lead the end-to-end design lifecycle of specialized hardware/software products, from conceptual Figma wireframes to physical 3D-printed prototypes and production-ready deployments.
- Manage Linux-based server environments and automated backup protocols, maintaining 100% uptime for internal data systems.

CATERPILLAR INC. - TOCCOA GA

2014-2016

MANUFACTURING ENGINEER

- Contributed to cost savings projects on grinding equipment that totaled in excess of \$15K
- New Product Introduction and launch of a centrifugally cast seal ring production line
- 2014 RCWT Safety Summit Guest Speaker and Innovation Fair Speaker
- 2014 Steel Products GM Award recipient for safety project

TECHNICAL PROJECTS & PHILANTHROPY

Personal Portfolio | dustinkeeling.com - Built a high-performance portfolio using **Next.js** and **Tailwind CSS**, implementing complex animations and micro-interactions with **Framer Motion**.

Designed and 3D-printed a custom prosthetic - I used custom hand measurements to create a mechanical joint that mimicked natural movement, allowing him to securely hold tools and perform daily tasks again.

Industrial IoT Controller Interface - Developed a web-based UI for ESP32/ESP8266 microcontrollers using **MicroPython**, featuring real-time data visualization and responsive temperature control for resistive heating elements.