James Morton

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Summary

Mechanical Engineering student (B.S., Iowa State University, GPA 3.93) with hands-on experience in mechanical design, simulation, and fabrication. Proven skills in SolidWorks, CNC machining, Python, Unity (C#), and team-based engineering through SAE Baja and technical side projects. Trained in CAD modeling, reverse engineering, and collaborative product development. Eager to apply technical and communication skills to an internship or entry-level role in mechanical or aerospace engineering.

Education

Iowa State University **May 2028**
Bachelor of Science, Mechanical Engineering
- **GPA:** 3.93 / 4.00
- **Coursework:** Principles of Materials Science, Engineering Drawing, Differential Equations, Engineering Computer Science

Metropolitan Community College **May 2024**
Supplemental Classes

Iowa Western Community College **May 2025**
Supplemental Classes

Technical Skills

- **Programming & Tools**: Python, C#, Java, MATLAB, Excel, Simulink
- **CAD/Engineering**: SolidWorks, CAD/CAM, FEA Simulations and Analysis
- **Manufacturing & Hardware**: CNC Mills, Lathes, MIG, Welding, GD&T, ASME Standards, 3D Printing
- **Game Development**: Unity Engine, Object-Oriented Programming (OOP), Asset Integration
- **Soft Skills**: Teamwork, Communication, Adaptability, Curiosity, Time Management

Work Experience

Tropical Smoothie Cafe **2021 - 2024**
Assistant Manager *Papillion, NE*
- Managed communication channels between customers, staff, and vendors to resolve issues promptly and maintain consistent service quality, contributing to positive Google review trends.
- Trained 10+ employees across food safety, hygiene, and customer service protocols, resulting in 100% compliance and improved team readiness.
- Oversaw inventory and supply chain coordination for an 8-person team, reducing food waste by 15% and ensuring stock availability during high-volume periods.
- Volunteered for 15+ shifts during staffing shortages to maintain operations and team morale.

Projects

3D Role-Playing Game (Unity + C#)
- Independently developing a 3D RPG in Unity using C#, featuring real-time mechanics, physics, and UI systems.
- Designed and implemented core gameplay loops, character controllers, and asset integration from Blender.
- Applied object-oriented programming and debugging to iterate on weekly features and user feedback.

Engineering Computation Project
- Collaborated with team to solve real-world mechanical problems using Python (NumPy, Matplotlib).
- Wrote and validated custom scripts for data analysis and simulation of dynamic systems.

Reverse Engineering & CAD Project
- Reverse-engineered a consumer product and built a full SolidWorks CAD assembly with motion studies.
- Documented part specifications using GD&T and ASME standards to meet manufacturing-ready output.