Grant Howard

(832)-758-2870 | Grhoward56@gmail.com | https://www.linkedin.com/in/grant-howard-235a54271/

EDUCATION

University of Texas at Tyler, Houston, TX **Dec 2024**

Bachelor of Science in Mechanical Engineering (BSME)

PROFESSIONAL EXPERIENCE

Houston Community College, Katy, TX **Oct 2024**

Technician Specialist

- Mentored the Katy Rocketry Club in rocket telemetry, guiding students through rocket design, construction, and data analysis to improve launch success and increase engagement.
- Led training sessions on makerspace equipment (3D printers, laser engravers, vinyl cutters, soldering stations), helping over 50 students' complete projects safely and effectively.
- Introduced interactive demos and personalized feedback on 3D design platforms (Fusion 360, SolidWorks), boosting student confidence and producing innovative prototypes.
- Increased makerspace usage by conducting campus tours, hosting info sessions, and integrating tools into assignments, resulting in higher student involvement and technical skill development.
- Maintained equipment efficiency through a preventive maintenance schedule, staff training on troubleshooting, and enforced safety protocols, reducing downtime by 50%.

Pepperoni's, location **Jun 2018**

Delivery Specialist

- Maintained storage and sanitary conditions at prep station/cooking area as per state/OSHA requirement and standards.
- Documented and completed tasks throughout the day when rotating stations.
- Assisted on shift manager with supply count for orders.
- Repaired stationary machinery & building amenities, colleagues transportation to execute delivery orders, and cleaning supplies.

Freelance Repair & Restoration Tech **May 2016**

Owner/Technician

- Offered hydro powered preventative maintenance and restoration to early stage deteriorating vehicles & residential homes which prevented $10,000's of future repairs and replacements.
- Provided automotive repairs, diagnostics, and routine maintenance for fuel economy/vehicle longevity.
- Sourcing proper material and hardware for long term durability and sustainability pre and post installation of the project and client requirements/expectations.

PROJECTS & EXTRACURRICULAR

Designing and Testing of a solar Charging Station for Micro-Mobility, Portable Devices and Energy Education (Team Lead) **Jan 2024**

- Designed and built a 300 W solar charging station with a 1,000 Wh battery system, charge controller, and power inverter, capable of supporting devices up to 500 W.
- Conducted testing and data analysis to optimize energy output, ensuring reliable functionality for micro-mobility (e.g., scooters) and portable devices.
- Demonstrated the station's impact in various settings, including community outreach and university events, emphasizing renewable energy education for underrepresented communities.
- Achieved notable recognition, placing 3rd in a national Community Energy Innovation Prize competition among hundreds of teams and securing $50,000 for the university.
- Served as team lead, overseeing deliverables, coordinating schedules, and ensuring the project was completed on time and within scope.

Independent Study (IoT Integration & Educational Tools) **Aug 2024**

- Troubleshot and restored existing laboratory equipment, bringing key teaching tools back online for future classes and enhancing the hands-on learning environment.
- Developed a new course outline, including material highlights and learning objectives, to expand the engineering curriculum for the university.
- Upgraded the solar charging station by integrating Arduino Cloud IoT for remote monitoring and online lab lectures, enabling real-time data access and off-campus demonstrations.
- Facilitated online learning by creating a remote-access platform, allowing students to interact with and study system performance from anywhere.
- Advanced engineering education at the university by supporting innovative lab experiences and showcasing the value of IoT-enabled technologies in sustainable energy systems.

SKILLS

Programming languages: C++, C-Star

Computer software/ frameworks: Arduino, Fusion 360, ANSYS, SolidWorks, MATLAB, Tinker CAD, AutoCAD

Hardware: Low-voltage systems, microcontrollers, soldering stations, 3D Printing (FDM), Epilog CNC laser printers, electrical and mechanical design

Additional Skills & Specialties: Finite Element Analysis, Product Design, Embedded Systems, Plasma torch/cutter, TIG Welding