CHRISTOPHER C. PILLOW

MECHANICAL DESIGN/TEST ENGINEER

434.409.2706 · ccpillow@gmail.com

2235 E 6th St., Apt. 218 · Austin, TX · 78702

Resourceful engineer practiced in designing and developing custom-engineered systems and parts from R&D through vendor selection and production. Collaborative communicator, focused on building top-performing teams and promoting cooperation across business lines to drive quality and efficiency improvements. *Areas of Expertise include:*

- ✓ Computer-Aided Product Design
- ✓ Production Planning
- ✓ Computational Fluid Dynamics
- ✓ Team Building & Leadership
- ✓ Data Acquisition/Mathematica
- ✓ Piping and Instrumentation Diagrams
- ✓ Geometric Dimensioning and Tolerancing
- ✓ Quality Assurance
- ✓ Product Testing
- ✓ Project Management
- ✓ Machining Skills
- ✓ Problem Resolution

EDUCATION & TRAINING

Bachelor of Science in Mechanical Engineering
Virginia Tech | Blacksburg, VA | 2015

United States Navy:
Nuclear Power Training Unit - Ballston Spa & Nuclear Power School, 2005
Nuclear Field "A" School, Machinist Mate, 2004

Technical Skills:
Inventor | Solidworks | Catia V5 | Matlab | Simulink | Solidcam | NX Cam | ANSYS
FEA | Advanced Excel | NI myDAQ | Somat InField | LabVIEW

EXPERIENCE & NOTABLE CONTRIBUTIONS

FONTAINE MODIFICATION · Garland, TX · 2015 – Present

A recognized leader in truck modifications delivering innovative, custom engineered solutions

PRODUCT ENGINEER, PRODUCTION SUPERVISOR

Design and select new concepts for production components, prototyping, testing, engineering analysis, modeling, finite element analysis (FEA), and vendor selection. Provide hands-on leadership in production, personally building prototypes and completing installations to improve work instructions and testing procedures.

KEY ACCOMPLISHMENTS:

- Designed more than 20 final production components now installed across dozens of heavy truck fleets
- Identified 45 issues in new production parts received from vendors over 13 months by verifying and tracking specification conformance
- Designed and constructed test equipment to test mechanical joints on CNG system
- Improved record keeping by implementing a system that linked each vehicle by VIN, to mechanical and electrical, quality assurance (QA), weld magnetic particle inspection (MPI), and wheel alignment test results

VIRGINIA TECH · Blacksburg, VA · 2014 – 2015

TEAM CAPTAIN, BAJA SAE

Led a team of 20 to design, build, and race a single seat off-road vehicle for an international design competition run by the Society of Automotive Engineers (SAE), requiring detailed knowledge of automotive engineering and land vehicle dynamics.

KEY ACCOMPLISHMENTS:

- Pioneered advanced testing methods and data acquisition techniques at Virginia Tech using strain gauges, accelerometers, optical, Hall Effect, and torque sensors, as well as GPS, and string potentiometers
- Decreased acceleration time 10% and reduced backshift time over an off-the-shelf transmission by designing and fabricating an application-specific continuously variable transmission (CVT)
- Achieved weight reduction of 13% through component optimization by optimizing component design and eliminating as much unneeded material as possible

UNITED STATES NAVY · USS Hartford SSN-768 · 2004 – 2010

QUALITY ASSURANCE SUPERVISOR, NUCLEAR SUBMARINE

Implemented and monitored quality assurance activities contributing significantly to an 18-month depot modernization period, 2 intensive pre-overseas movement upkeeps, and recertification of the propulsion system during a post collision damage assessment. Completed and certified final inspections to critical repair components such as nuclear and main seawater valves and joints utilizing in-depth experience with the SUBSAFE system NASA adopted after the Space Shuttle Columbia disaster.

KEY ACCOMPLISHMENTS:

- Achieved 100% readiness and zero major defects during certification and safety inspections, awarded 3rd Navy and Marine Corps Achievement Medal, 2010
- Restored ship's trim and drain system after catastrophic failure working around the clock to manufacture 3 plugs to detailed specifications recognized for exceptional expertise with Navy and Marine Corps Achievement Medal, 2009
- Awarded Navy and Marine Corps Achievement Medal for superior job performance completing over 300 corrective and preventative maintenance actions for 2 intensive pre-overseas maintenance periods, 2008

ENGINE ROOM SUPERVISOR, NUCLEAR SUBMARINE

Supervised and served as system expert for all propulsion and auxiliary systems, including primary and secondary nuclear systems, propulsion equipment, hydraulics, freshwater production, refrigeration, and life support.

KEY ACCOMPLISHMENTS:

- Trained and assisted officers and junior personnel to accomplish qualifications for both reactor and ship systems
- Resolved freshwater production system failure by using gas tungsten arc welding (GTAW) to add material back to damaged valve stem, machining the component and returning it to its original specifications

SHIP'S DIVING SUPERVISOR, NUCLEAR SUBMARINE

Led and managed submarine dive division logging more than 100 supervised dives.

KEY ACCOMPLISHMENTS:

- Evaluated at 100% deployable readiness and achieved 100% mission completion and with no accidents or injuries

ADDITIONAL ACCOMPLISHMENTS

TEAM LEADER, NSF SCITE SCHOLARSHIP, 2011 – 2012

Directed and organized a ten-person team to design a fully-functional inductive loop parking lot monitoring system capable of reporting the number of cars parked and parking spaces remaining.

KEY ACCOMPLISHMENTS:

- Reduced parking lot congestion by providing drivers with lot capacity information