

BENJAMIN KRUG

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SKILLS

Strong mathematical and physical reasoning, experience in computer programming and scripting. Proficient with C++ and Python, familiar with web development languages like HTML, CSS and SQL. Interests include arithmetic topology, data and error analysis, and cryptography. Excellent personal skills and enjoy working in a team environment. Experience working under pressure in hazardous environments; broad experience including development, quality control, customer interface, and supervision.

WORK EXPERIENCE

Quality Inspector | Accu-Precision, Inc **2018 - Present**

- Responsibilities included the quality inspection of parts machined for aerospace and other tight-tolerance purposes.
- Performed measurements using optical comparators, height gages, CMMs, and other precision-calibrated devices.
- Process of inspection included careful documentation of measurements taken during and after a part's machining process, including certifications detailing the materials and hardening procedures used.
- Performed inspections based on ISO 9000, AS 9100, and other high precision standards.

Quality Production Operator | Vestas Blades Americas, Inc **2015 - 2017**

- Responsibilities included the quality inspection and production of 54m turbine blades.
- Supported the manufacturing processes starting at the beginning of the build and continuing through the release of the product to the finishing department.
- Process of inspection included careful documentation of measurements taken during production, including the removal and repair of defects.
- Performed inspections based on internal quality procedures and criteria using custom gauges along with industry standard equipment. (e.g. calipers, go/no-go, and thermal imaging cameras)

Programmer | CNE Creative Enterprises **2015 - 2016**

- Responsibilities included software programming for embedded control systems using BASH, Python, and C++. Developed software for Arduino, Raspberry Pi, and other custom hardware platforms.
- Developed custom software used for new product development testing of automated vending machine systems.
- Developed a Raspberry Pi based system that interfaced with digital scales and temperature devices for properly measuring and dispensing ice. This included the implementation and testing of complex algorithms to improve weight measurement precision.
- Used HTML, CSS, MySQL in the creation, design, and management of internal and external websites.
- Evaluated existing database information and developed new scripting to troubleshoot and solve existing database errors.
- Routinely worked directly with hardware systems using oscilloscopes, digital volt meters, and other standard electronic equipment.

Laboratory Research Assistant | University of Colorado **2014 - 2015**

- Studied the optical and mechanical effects of temperature change on photo-polymerized liquid crystal particles using high powered UV lasers.
- Used glass cleaning and preparation techniques to optimize the alignment of nematic colloidal liquid crystal material for microscopic observations under polarized light filters.
- Explored different material, optical, and thermal procedures to troubleshoot material failures of liquid crystal samples, using custom heating plates and varying heating and cooling techniques.

Aerial Fireworks Pyrotechnician | Firestorm Pyrotechnics, Inc. **2010 - Present**

- Fireworks display operator in charge of the setup, loading, fusing, wiring, and execution of large production fireworks shows.
- Coordination of the handling and movement of hazardous explosive products.
- Quality inspection of the setup and fusing of devices and providing feedback to other pyrotechnicians on fusing and setup techniques.
- Improvement of processes and techniques led to 90% reduction in performance failures during show.

EDUCATION

University of Colorado at Boulder - B.A. in Physics and Mathematics

Dec. 2017

REFERENCES

Stanton Wyllie | Supervisor at Vestas Blades America, Inc.
Eric Fitzsimons | Employer at CNE Creative Enterprises.
Robert Brandes | Employer at Firestorm Pyrotechnics, Inc.

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