Hyunwoo Kwon

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EDUCATION

Bachelor of Science in Mechanical Engineering

Minor in Computer Science • University of Illinois at Urbana-Champaign • Urbana, IL • 08/2019 – 12/2024 • 3.93

EXPERIENCE

Systems Admin

Beckman Institute February 2023- May 2023, Urbana, Illinois

* Automated web page creation process using Python templates, reducing the time required to create HTML files from hours to just 1 second, resulting in increased efficiency and productivity.
* Successfully installed new UPS systems and built computers for graduate researchers, resulting in improved equipment availability.
* Collaborated with various departmental research groups to optimize inventory management by accurately tracking all incoming and outgoing items, resulting in a comprehensive and up-to-date inventory with at least 100 items.

Research Assistant

Looxent Inc. April 2022 - July 2022, Seoul, South Korea

* Uncovered supplier discomfort with tight deadlines through communication, led negotiations for looser deadlines that reduced costs for Hanssem Corporation by 7%, and optimized inventory management through revamped work-in-progress product practices.
* Slashed purchase costs for several hardware products by up to 40% by seeking Chinese manufacturing companies and negotiating for better prices, resulting in annual savings of at least $60,000 for the company.
* Facilitated communication between Hanssem's international branches and clients and successfully established four new supplier contracts for 2023, resulting in a decrease of 10% in spending for the company.
* Designed RFPs for five different products after collecting product specifications from several departments and translating important technical considerations into Chinese and English, resulting in an increased response rate of 20% from potential suppliers.

Signaler

The Republic of Korea Army August 2020 - February 2022, Seoul, South Korea

* Diagnosed and resolved over 20 defects in military radios' communication devices, including faulty parts like batteries and antennas.
* Monitored multiple radio devices responsibly, ensuring seamless communication during emergencies for 18 months.
* Applied technical expertise and experience to maintain, repair, and test communication devices, ensuring optimal performance.

INVOLVEMENT

Undergraduate Researcher

Wave Propagation and Metamaterials Laboratory • December 2022 – Present

* Programmed controls for linear motion stages with MATLAB, enabling precise positioning of magneto-active elastomer samples for analysis, showcasing technical proficiency in software development.
* Engineered a new setup with components such as piezoelectric actuators and devised an algorithm to determine position with zero force, reducing setup time by over 5 minutes per sample, and demonstrating problem-solving skills and resourcefulness.
* Conducted error analysis on 96 magneto-active elastomer samples to determine the impact of magnetic fields on Young's modulus, showcasing technical proficiency in materials testing and analysis.
* Designed and created CAD models for the setup of the magneto-active elastomer sample to the force sensor, optimizing eigenfrequencies through simulation analysis

**Selected Member**

University of Illinois at Urbana-Champaign ASME • August 2019 – March 2020

* Introduced a new structure for constructing the sturdiest and tallest paper tower, achieving a 1.3 times increase in height using the same amount of paper, demonstrating innovative thinking and engineering expertise.
* Collaborated with a team of eight members in developing the chassis for the mechanical device, utilizing 3D printing technology and guiding team members to understand the design.

CERTIFICATIONS & AWARDS

HSK 6 (Chinese Proficiency Test)

Chinese Testing International Co., LTD • 2019

Illinois Design Challenge 2023

1st place in Chart Industries Sponsored Challenge and Open Challenge

Portfolio: <https://devpost.com/software/ecogrind> / <https://devpost.com/software/weldaid/>

SKILLS

Software: AutoCAD, Fusion360, CREO, Java, C++, MATLAB

Language: Korean, Chinese