Your project strengthens Eaton’s capabilities in environmental stewardship by making the Life Cycle Assessment process faster, more accurate, and accessible. The reduction in lead time from 2 hours to 5 minutes and the significant accuracy boost equip the organization to respond swiftly to environmental requirements. Furthermore, this enhanced capability provides Eaton with a competitive advantage, as the ability to assess products through LCA gives the company insight into product sustainability, differentiating Eaton in an increasingly eco-conscious market.

With the automation of BOM processes, the project not only delivers time savings but also ensures high standards in conformance, such as keeping weight deviations within a 5% tolerance. These results provide a critical competitive edge by allowing Eaton to offer reliably assessed, sustainable products faster than competitors, thus enhancing both customer satisfaction and Eaton’s market position.

selecting the best-performing model and applying NLP for LCA data, you showed innovation and strategic decision-making. Your choice of an NLP-based approach demonstrates a calculated use of advanced technology to overcome industry challenges.

The implementation of the GUI further enhances collaboration, as it allows team members to interact with and benefit from the tool regardless of their technical background.

With LCA data now available quickly and accurately, Eaton can deliver products that meet or exceed environmental standards, aligning with the growing customer focus on sustainability. This project allows Eaton to respond to customer needs for environmentally responsible products, creating a competitive edge that caters to an eco-conscious market while building brand loyalty and customer trust.

The future scope demonstrates innovative thinking by exploring new ways to automate and streamline complex, manual tasks. By integrating additional capabilities like reading specs from drawings or extracting data from PDFs, the project could further support accurate, efficient data processing across multiple applications.

**Comments 1:**

**BOC**: Demonstration of NLP based search engine on LCA data augmentation

Identified the best performing model for diverse LCA database.

Developed a search engine that identifies the most similar component description.

Demonstrated a GUI on centaur BOM that auto-populates the LCA master sheet from database, and provide the similarity score which resulted in lead time reduction from 2Hrs to 5mins.

Dramatical reduction in error in total weight with an achieved accuracy of 80% Successfully fulfilling the conformance requirement that the difference in the actual weight of the product and assessed weight of product should be within #5 cutoff tolerance

**GROWTH**: Support the EPC ROM building project

Identified and Generalized total 9 number of snap types used in all Eaton power connectors

Performed full model and reduced model comparison with an accuracy greater than 90%

Identified the design space for parametric model for one of the snap types.

Trained an Al/Mimodel with an accuracy higher than 90% for design space.

**OPEX**: OTD and FPY

\* Kept both OTD and FYP above 80% during the course of the projects

OPEX: Fun@Work

Have actively participated in arranging Fun@Work activities such as potluck, birthdays, farewells and outing. Which Advocates for healthy work-life balance by promoting flexible hours, wellness initiatives, and ensuring that the work environment feels balanced and not overly stressful.

Others:

Participated in Anubhav assignment for Reverse mentoring the senior learder Medha. fostering mutual respect, strengthens communication, knowledge transfer, and enhances collaboration between different levels of leadership.

**Innovation**: Filed disclosure on LCA data augmentation project

With this innovative approach of data augmentation using NLP, lead time reduction

from 2Hrs to Smins can be achieved. With an annual projection of 200 LCAs, annual effort of 400Hrs can be reduced to 17Hs

**Passionate and innovative**

Demonstrated **passion** and **accountability** by leading the development of an NLP-based search engine for LCA data, my **passion** for innovation drove me to explore and implement advanced NLP techniques, ensuring high accuracy and efficiency in component matching. This enthusiasm for continuous improvement fueled my commitment to reducing lead times and enhancing data quality

**Passionate** about continuous improvement, I have demonstrated the work seting the foundation for future applications, like drawing spec reading and PDF content identification, demonstrating a commitment to improve **efficiency**, scalability, and **innovation** enabling scope for future cross-functional excellence.

In the EPC ROM project, I My **passion** for continuous improvement drove me to learn new tools and techniques, like ANSYS Mechanical and scripting, to optimize the process. I was deeply motivated to overcome challenges, ensuring the project's success and driving Eaton's engineering capabilities forward, reflecting my dedication to both personal growth and the advancement of the project.

**Accountable**

In the LCA data augmentation project, I demonstrated **accountability** by ensuring the accurate identification of similar component descriptions and reducing lead times from 2 hours to 5 minutes. I took full ownership of the process, consistently delivering high-quality results, and ensuring the accuracy of the NLP models, which contributed to a reduction in errors and met the project's conformance requirements. My commitment to meeting deadlines and maintaining high standards reflects my responsibility toward the project's success and Eaton’s operational goals.

In the EPC ROM project, I demonstrated **accountability** by taking full ownership of the process from the initial learning phase to the final implementation. I ensured leveraging product team and DAP teams experience for the accuracy and reliability of the models by proactively addressing challenges, such as the learning curve with ANSYS Mechanical, and finding efficient solutions through scripting for parametrization. In the EPC ROM project, I demonstrated **accountability** by actively leveraging the expertise of the product team and DAP teams for validating the approach and ensuring the maturity of the standard practices.

**Learner**

During the LCA data augmentation project, I proactively learned and applied advanced NLP models like **BERT, LLMs, Word2Vec, ELMo,** and **FastText** to optimize component matching accuracy. This continuous learning enhanced my technical proficiency, enabling me to choose the best model for each task. My ability to adapt and innovate using these models reflects a commitment to ongoing development. This expertise supports Eaton's long-term capability in applying cutting-edge technologies for sustainable solutions.

In the EPC ROM project, I demonstrated the **learner** attribute by immersing myself in learning **FEA in ANSYS Mechanical** for snap insertion. I further expanded my skillset by learning **ANSYS scripting for parametrization**, enabling more efficient model adjustments and greater flexibility in handling design variations. Additionally, I learned **Mode Frontier** for AI model training, gaining valuable insights into various Ai models. This continuous learning process allowed me to adapt to new tools and methodologies, driving the project’s success and improving streamline of the process.

**Efficient**

Strengthened Eaton’s **efficiency** and data accessibility by generalizing and standardizing LCA data for BOM automation, empowering teams with reliable, reusable tools for consistent, accurate lifecycle data assessment.

During the initial phase of the EPC ROM project, the learning curve in ANSYS Mechanical required some time to overcome. However, once I became more familiar with the tool and FEA, I took **accountability** for optimizing the process by consistently seeking better methods, either through self-learning or by leveraging the expertise of others. This proactive approach allowed me to streamline workflows, improve **efficiency**, and deliver high-quality results, ensuring the project stayed on track and met Eaton's engineering standards.

Have explored the use of scripting instead of block reading for parametrization leading to minimal geometric failures, recognizing that scripting offered greater flexibility and efficiency in handling complex models. This decision, driven by a desire to improve process **efficiency**, allowed for more dynamic control and faster adjustments, ultimately streamlining the workflow. By taking this **accountability** for the technical direction, I was able to enhance the project’s overall productivity and reduce the time needed for model adjustments, ensuring better outcomes for future snap optimization of rest of the types.

**Ethical**

In the EPC ROM project, I demonstrated the **ethical** attribute by ensuring **transparency** in my work, maintaining integrity in the data used for simulations and AI model training, and adhering to industry standards for accuracy and reliability. I prioritized open communication with team members, sharing insights and challenges openly to ensure alignment and foster trust. Additionally, I maintained accountability for my decisions, ensuring that all methods, tools, and results were ethically sound and aligned with Eaton’s values of responsibility, fairness, and high-quality standards.

In the LCA data augmentation project, I demonstrated the **ethical** attribute by ensuring **transparency** in the use of NLP models and the accuracy of the data used for component matching. I was committed to maintaining the **integrity** of the lifecycle data, ensuring that the process adhered to ethical guidelines for sustainability and environmental impact assessment. Throughout the project, I communicated openly with the team, fostering trust and ensuring that the results were reliable and aligned with Eaton’s values of responsibility, environmental stewardship,