

DD6 - PCFBench - an open benchmark for AI assisted Product Carbon Footprinting

How good is your Frontier LLM of choice at carbon footprinting? Does it give you a plausible answer? And if it does, did it get there through clever guesswork, or correctly reasoning through the stages of a PCF study? PCFBench is a new open benchmark (a standardised test for AIs) to help answer just these types of questions. Come to our station to see which models perform well, which tasks AIs are good - and bad - at, and most importantly test yourself against the benchmark in our “Battle the Bots” game!

Where is the tool seated? ☐ Data (new/improved inventory data) ☐ Model (new computational framework or coupling) ☒ AI usage (LLM / ML / agent in the workflow) ☐ Linking systems (engineering ↔ LCA, ESM ↔ LCA, etc.) ☐ Infrastructure / tooling (deployment, packaging, APIs) Where is it located in the Brightway/LCA ecosystem, if at all: Standalone open resource for the LCA community to use, improve and contribute to	Development level: ☐ Early concept / prototype (not yet usable by others) ☐ Beta (usable with guidance, bugs expected) ☒ Stable release (documented, versioned, community-ready) Where you can help me: This is an early version and we would value review and feedback from this community, especially on whether the task decomposition reflects how practitioners actually build and review PCFs; whether the task-specific schemas preserve sufficient context to provide reasonably defensible answers; any gaps that should become new tasks or contributed datasets
Technical / practical details: The evaluation harness, including the CLI to run the evals is in the open source github repo. The datasets are published on HuggingFace. Full details in the paper (currently on arXiv). See links below.	
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