

## HW–SW Co-Design Project

### Prompts Used

“I’m running `perf record ... python3-dbg -m pyperformance --bench json_dumps` on QEMU guest. Which flags ensure reliable Python stacks (DWARF) and minimize lost samples?”

“Give me script to build micro benchmark of data for profiling `json.dumps()`”

“`pyperformance` is spawning its own `venv`; how do I force it to use `/usr/bin/python3-dbg` so `perf` sees Python symbols? Is `--python /usr/bin/python3-dbg` correct?”

“Write a `sitecustomize.py` that redirects `json.dumps` → `orjson.dumps`”

“When should I prefer `py-spy record --native` vs `perf record --call-graph dwarf` for Python + native frames in a VM? Trade-offs and recommended flags?”

“What set of parameters should I document (IPC, cache misses...) when reporting `pyperformance` `perf stat` results?”

“Help me run the micro benchmark but without the C speedups in `json.dumps`”