

# Complications in supporting TensorFlow

- TensorFlow has gained widespread popularity for machine-learning contexts.
- TensorFlow installations are best supported in non-relocatable environments.
  - Allows for hardware optimization at build-time, including potential offloading capabilities.
- Producing a relocatable TensorFlow build via UPS is difficult.
  1. Build support is through Bazel, which has been poorly documented; it's better now.
  2. Builds require internal installations of software that are also supplied as UPS products (e.g. protobuf, Eigen).
    - Third-party software is downloaded at build-time, introducing fragilities in software support.
    - In order to avoid binary and API incompatibilities, the SciSoft team must perform surgery on the build scripts.
  3. Hardware optimizations are more difficult to provide.
- SciSoft team meeting later today to discuss a way forward.