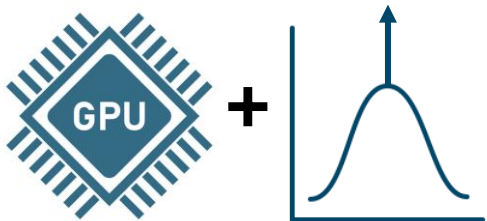


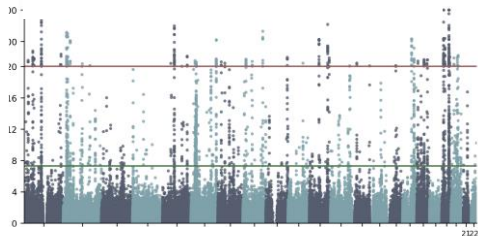
Heritability estimation

- RHE-MC: Fast moment-based estimator



Estimate genetic effects

- Spike-and-slab Stochastic VI
- GPUs for fast matrix product
- First-order optimizer: $O(\# \text{ samples})$



Calculating test statistics

- Score-based test statistics for GLMMs
- Match scaled effective sample size
- Firth Logistic Regr. for binary traits