This is a general description of the work that I can offer.

For bachelor level students there are mainly programming tasks available on the topic of distribution matching. Distribution matcher are general encoder that generate out of bit sequences symbol sequences with a desired distribution. This sounds a lot like inverse source coding - and there are lots of similarities and algorithms that can be applied.

The topic of distribution matching offers a lot of intuition even for students that have not heard Information theory

For master level students I offer tasks to analyse distribution matcher.

Advisors

Patrick Schulte