

# Extreme event prediction proposed workflow

## Regression Problem

## Classification Problem

What information do you want to gather?

Expected return value for a given return period

Probability of event compared to baseline

Binary prediction for specific time step

Long return period? (<1 event per year?)

Long return period? (<1 event per year?)

Yes

No

Yes

No

Peak-over-threshold approach: Linear or deep quantile regression + deep EVT regression for inference of events over conditional boundary

Deep quantile regression model

Peak-over-threshold approach: Deep classification model + deep EVT regression for inference of events over conditional boundary

Deep classification model