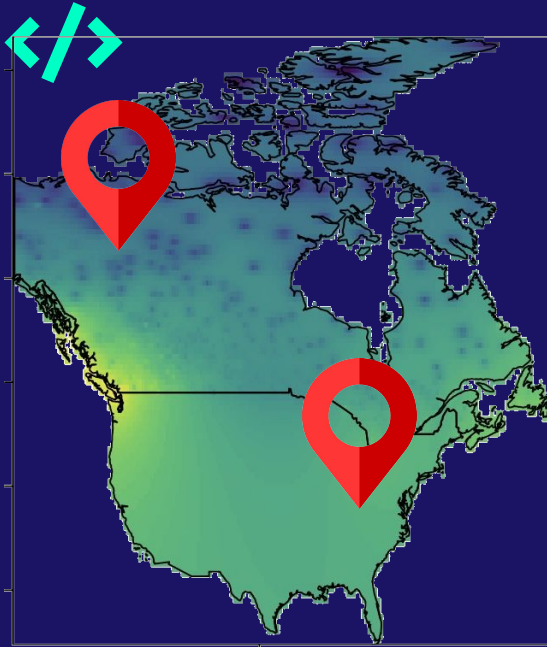


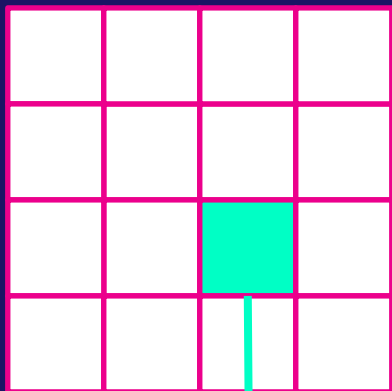
Finding Tomorrow's Floods Today: Climate Risk Analogues



Hailin Wang
Statistics and Actuarial Science
Supervisors: Jean-François Bégin, Barbara Sanders

A Present Reference for Future Flood Risk

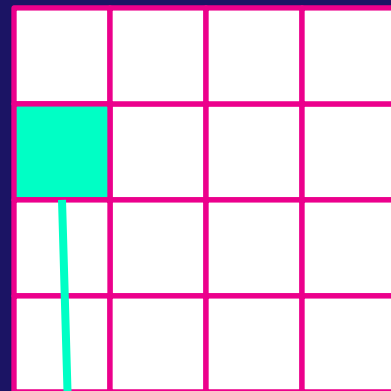
2025 Map of North America



Probability of
flood = 0.5

Analogues

2050 Map of North America

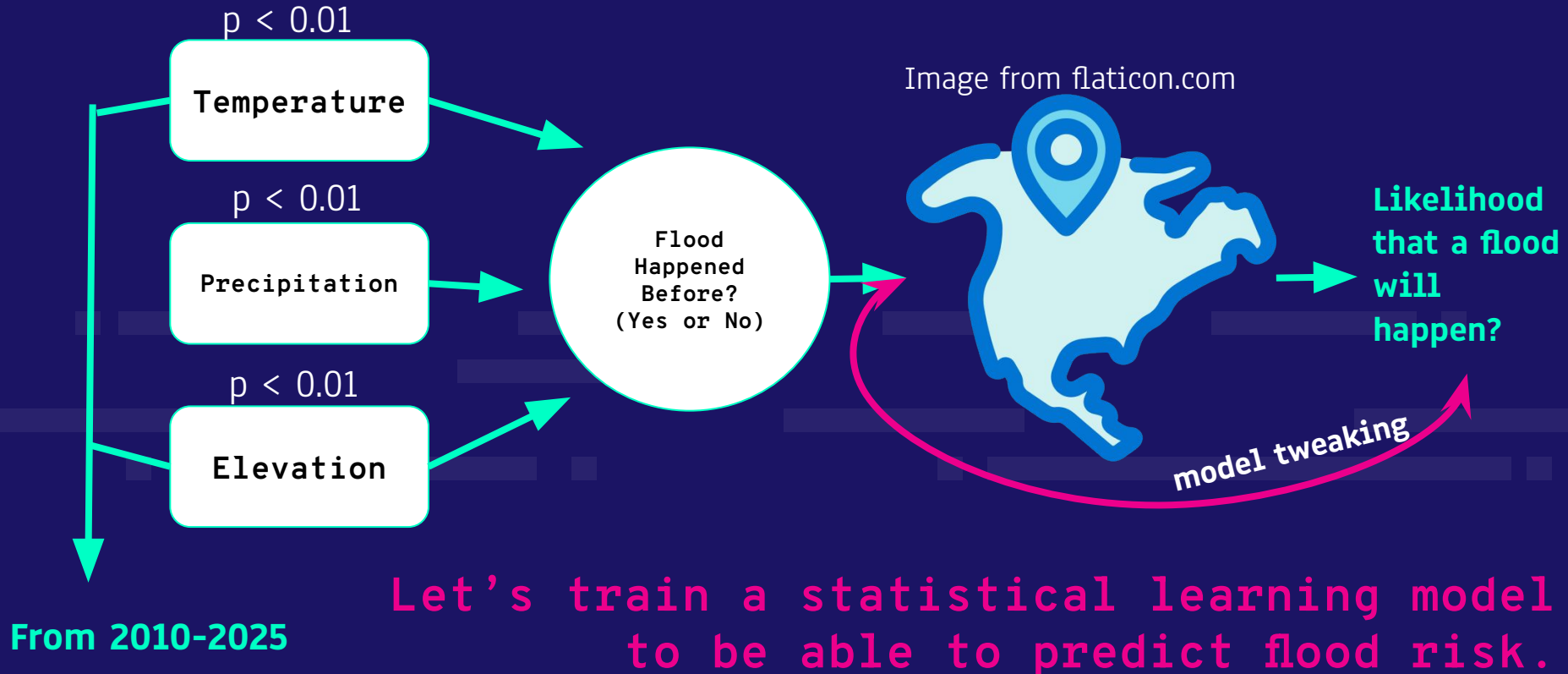


Probability of
flood = 0.5

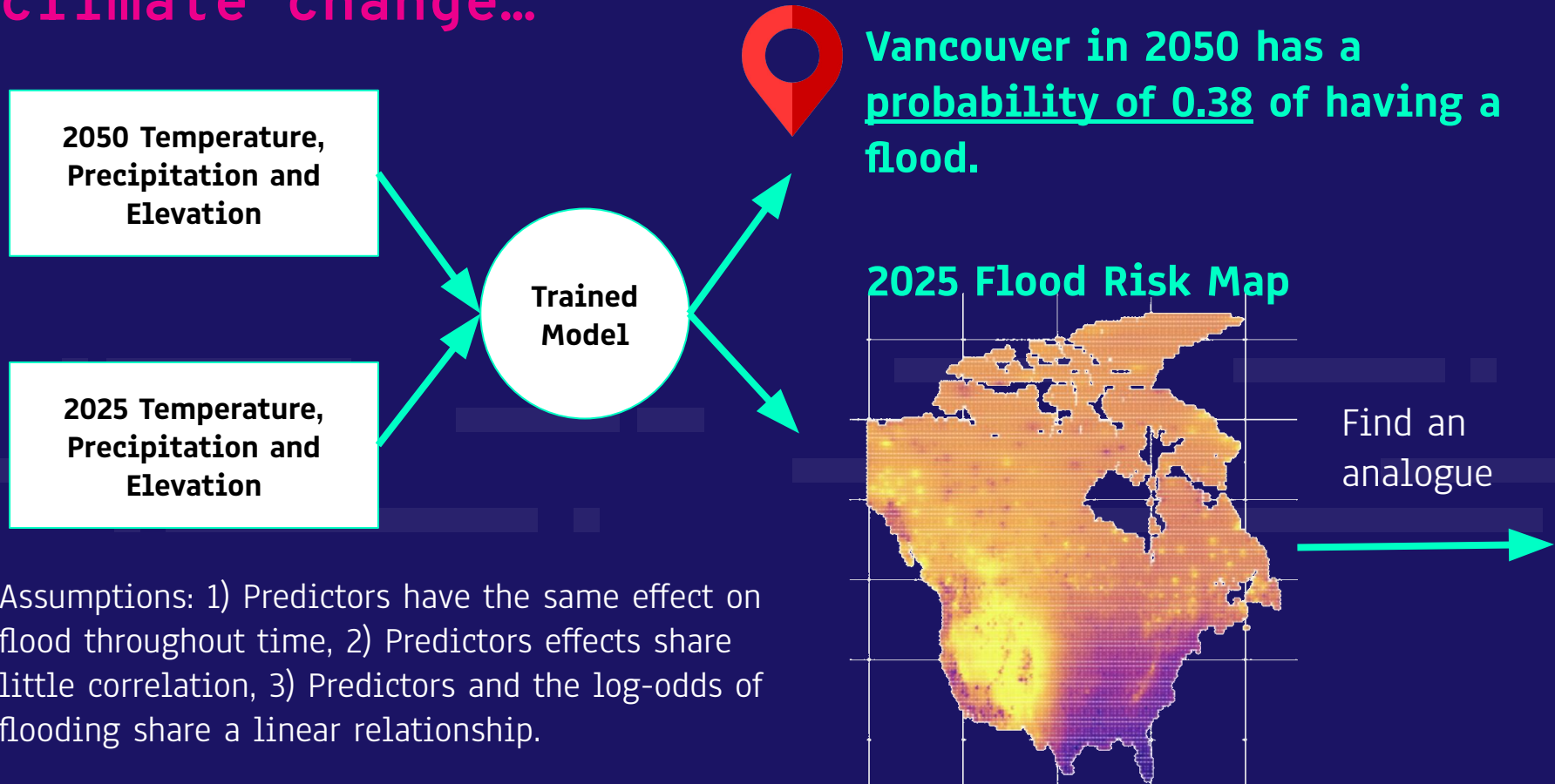


Climate
policy?

RQ: What is a location that, in year 2025,
represents the flood risk of **Vancouver** in 2050?



Vancouver in 2050 if we take **no action on climate change...**



Assumptions: 1) Predictors have the same effect on flood throughout time, 2) Predictors effects share little correlation, 3) Predictors and the log-odds of flooding share a linear relationship.

...is Ocean City, Maryland today!



Urban planners
can reference the
adaptation
design of the
analogue city.

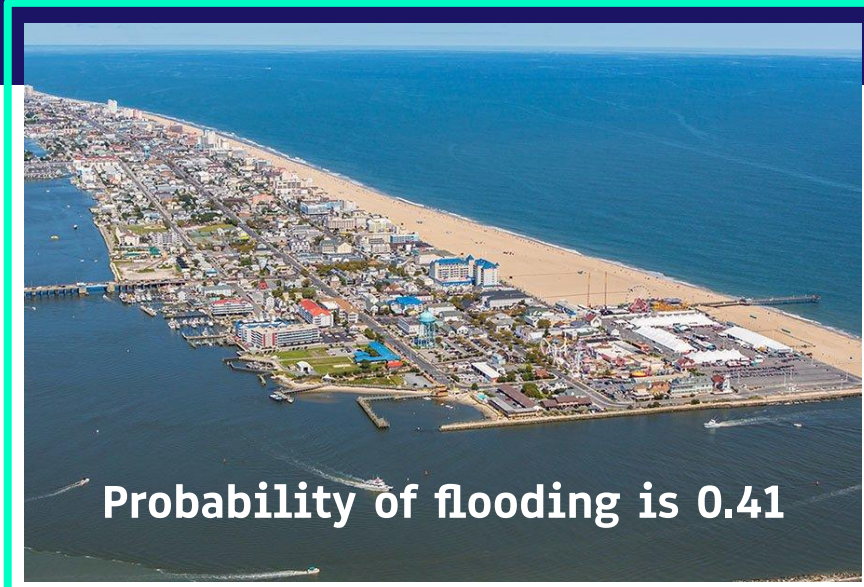


Image from Wikipedia



Policymakers have a
real-world example of what
works, and what doesn't.

Have a better
reference for
accounting the
amount of future
displaced
populations due
to flooding event.

