

Raw Data

(Genomic, Epi, Mobility)

Genomic:

- Pangolin lineage calls- GISAID metadata

Epi:

- CDC case reports
- Hospitalizations

Mobility:

- Google Community Reports

Temporal Alignment

(ISO Weeks)

Alignment Logic:

- Variant \leftrightarrow case date: $\Delta t \sim \square(14,5)$
- Mobility: Daily \rightarrow weekly avg
- Genomic lag: 14 ± 5 days

Feature Fusion

(398 Features)

Fused Features:

- Variant presence (20 binary)
- Case growth rate (Eq. 1)
- Mobility EMA (Eq. 6)
 - Rt value
 - Deaths