Membership Inference w Partial Information

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- We only give the attacker access to a fraction of SNVs from the target sequence, chosen at random.

- The attacker then uses the Recombination model as an inference method to predict the rest of the sequence.

- The PG formula needs adjusting:

$$PG_t = \frac{\overline{MIA_{t_p}}(R_t) - \overline{MIA_{t_p}}(S_{test})}{2}, \text{ where}$$

$$\overline{MIA_{t_p}}(S_{test}) = \sum_{S_i \in S_{test}} \frac{\Pr[MIA_{t_p}(S_i) = 1]}{2 * n_s}, \text{ and}$$

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MIA with Partial Information