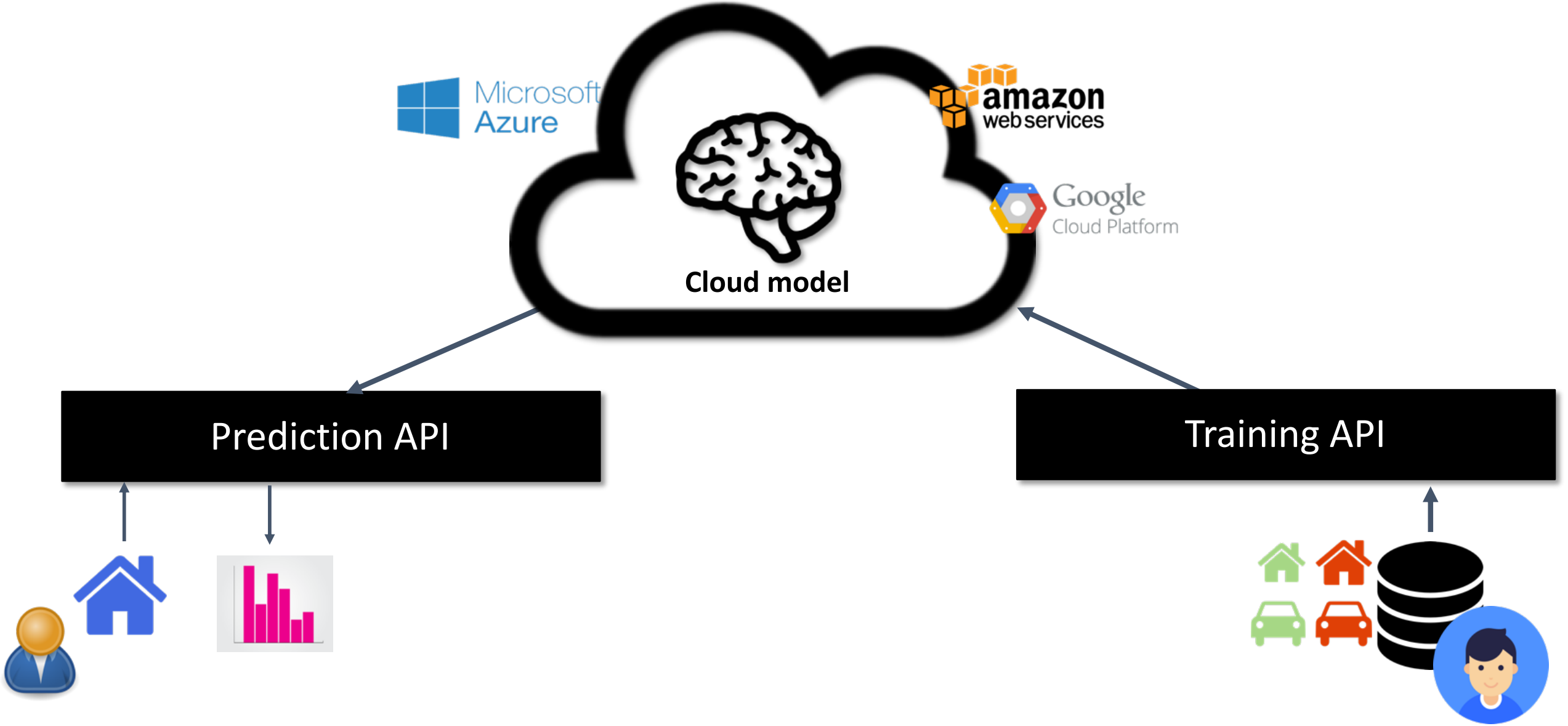
Machine Learning as a Service

Predictions are leaky!

Shokri et al. Membership inference attacks against machine learning models [S&P'17]


Microsoft Azure
amazon web services
Google Cloud Platform
Cloud model
Prediction API
Training API

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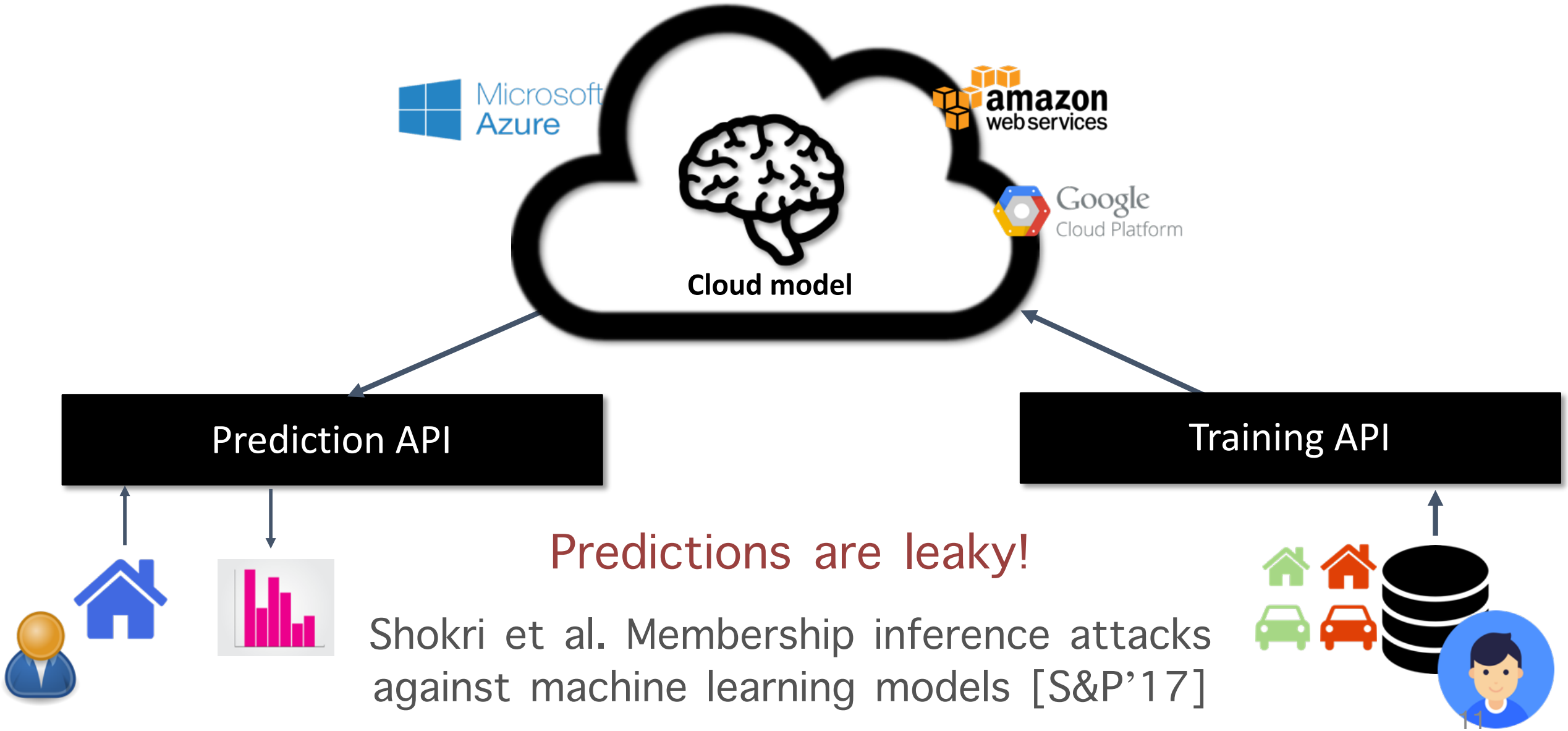
Machine Learning as a Service



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Membership Inference/Discriminative