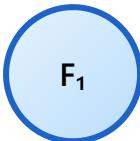
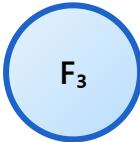


Feature Reuse and Composition

Layer I



F_2



k features



Layer I+1



P_2



P_4

...

k^2 patterns

COMPOSITIONAL EFFICIENCY

Combine k features → Create k^2 patterns



Reusable Components



Exponential Expressiveness



Modular Learning

EXAMPLE

"Eye" feature reused for detecting different faces, animals → Reduces redundancy