

N-gram Models: 75 Years of Language Prediction

Foundation Era

Statistical Revolution

Modern Applications

Theory

Research

Application

Product

Hybrid

Shannon
invents
concept

Statistical
NLP
begins

Google
search
suggestions

N-grams in
all smartphones

N-grams still
used for
efficiency

1970

1990

2007

2015

1948

1980

1998

2010

2020

IBM
speech
recognition

Machine
translation
revolution

iPhone
predictive
text

Neural models
start replacing
n-grams

Application

Application

Product

Transition