

Patent families

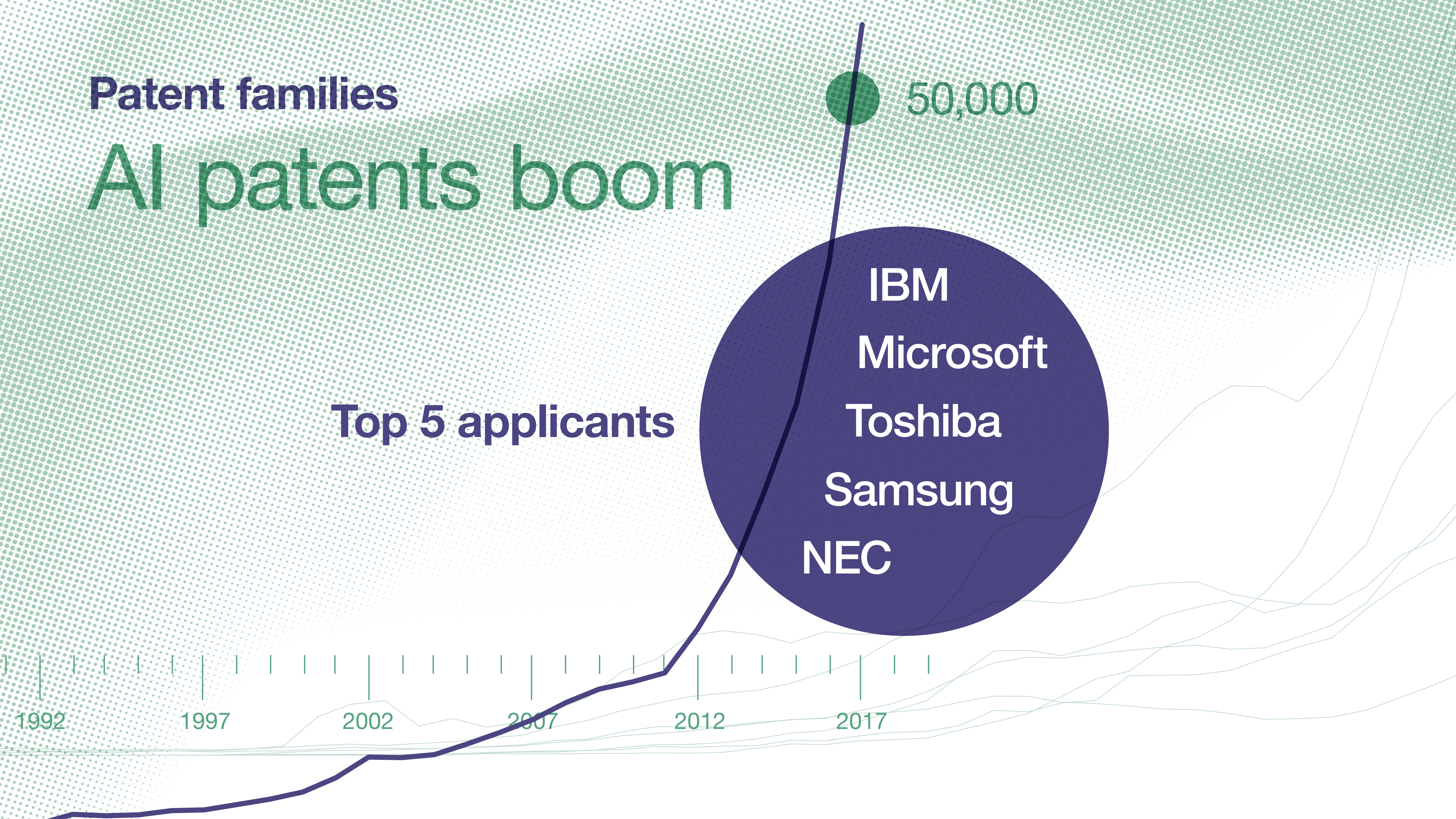
AI patents boom

● 50,000

Top 5 applicants

IBM
Microsoft
Toshiba
Samsung
NEC

1992 1997 2002 2007 2012 2017



AI techniques

Machine learning

Neural networks

(e.g. used in machine translation)

46.1%

average annual growth 2013–2016

Deep learning

(e.g. used in speech recognition systems)

174.6%

average annual growth 2013–2016

AI applications

Patent filings

Highest growth

AI for robotics

265%

growth in patent filings
between 2013 and 2016



Control methods

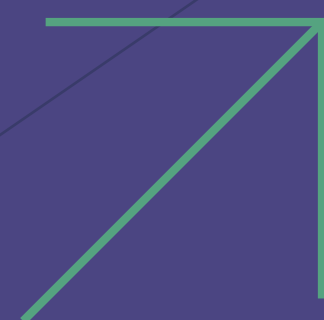
262%

growth in patent filings
between 2013 and 2016

Computer Vision

21,011

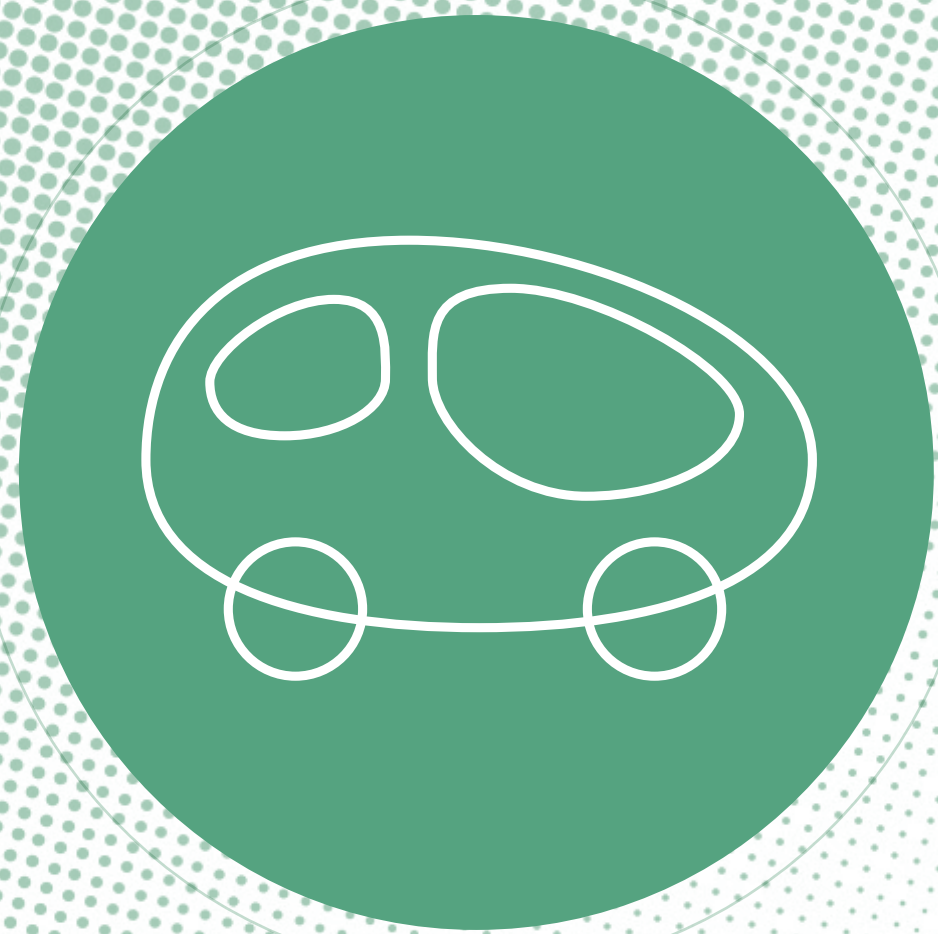
patent filings in 2016



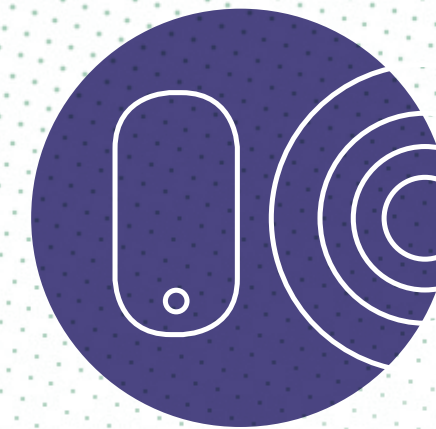
AI in industrial sectors

Highest growth rates

in patent filings between 2013 and 2016



134% ↗
Transportation



84% ↗
Telecommunications



40% ↗
Life and medical sciences



36% ↗
Personal devices,
computing and HCI