Natural language processing is an area experiencing high interest, investment, and growth.

No-code or low-code systems are unlocking new use cases for businesses.

Amazon Web Services, Azure, and Google Cloud’s low-code and no-code offerings will trickle down to everyday people, allowing them to create their own artificial intelligence applications and deploy them as easily as they could a website.

The race is on to capture AI cloudshare—and to become the most trusted provider of AI on remote servers.

The AI community still operates using a closed-source model. Researchers’ reluctance to publish their full code leads to less transparency and reproducibility, and makes accountability murky.

Natural language processing algorithms—typically used for text, words, and sentences—are being used to interpret genetic changes in viruses.

COVID-19 accelerated the use of AI in drug discovery last year. The first trial of an AI-discovered drug is underway in Japan.

AI plays key roles in synthetic biology, genetics, and medical imaging; predicting the spread of disease; and improving patient health outcomes.

New artificial nervous systems use AI and neural implants.

The SuperGLUE benchmark, which measures AI’s human language ability, will likely be surpassed by the end of 2021.

Artificial Intelligence

Summary
Gaussian processes, the gold standard for many real-world modeling problems, are becoming more accurate and easier to train.

AI researchers are leaving academia for corporations at an alarming pace.

Generative adversarial networks assist artists and musicians in new forms of creative expression.

A new wave of AI nationalism is rising as governments institute new restrictions on M&A and investment activity.

Several countries will launch national AI strategies in 2021 and 2022.

New measures to regulate the creation and distribution of deepfakes will be introduced throughout 2021 and 2022.

Technical alliances that help drive future R&D could also challenge existing geopolitical alliances.

Future wars will be fought in code, using data and algorithms as powerful weapons.

We continue to fail to see China’s growing AI proficiency as a military, economic, and diplomatic threat.

New software could be viable for 100 years by using AI to adapt to changes around it.