



Fast Radar Signal Detection on Edge Military Devices

A European defense entity required fast and reliable radar signal classification under highly noisy conditions. The system had to work in milliseconds and fit on photonic or ultra-light edge hardware.

Our solution

Using our Singularity deep learning platform and advanced electromagnetic modeling, we developed a signal detection model that trains 100× faster and uses 100× fewer parameters than existing state-of-the-art (SOTA) benchmarks.

Results

- ✓ 95—99% accuracy even at high noise levels (+5 dB)
- ✓ Outperformed SOTA across all signal-to-noise ratios, especially at extreme noise (−5 dB to −20 dB)
- ✓ Patent pending