

# **SEMINAR TOPIC: NEURALINK**

Submitted by

Jency Benny

Roll No: 38

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## **Abstract**

Neuralink, a neurotechnology company founded by Elon Musk in 2016, focuses on developing brain-computer interface (BCI) technologies. The company's primary goal is to create high-bandwidth, minimally invasive devices that enable direct communication between the human brain and external devices. Neuralink envisions applications in medical fields, such as treating neurological disorders (e.g., Parkinson's, epilepsy, and paralysis) and enhancing cognitive capabilities.

The core technology involves implantable neural interfaces, featuring ultra-thin, flexible threads capable of recording and stimulating brain activity with high precision. These threads are inserted using a custom-designed robotic system for accuracy and safety. In the long term, Neuralink aims to merge human intelligence with artificial intelligence, fostering a symbiotic relationship between humans and machines to address challenges posed by AI advancements.

The company's progress has included successful trials in animal models and early steps toward human clinical trials. Neuralink represents a significant leap in neuroscience and BCI research, with potential to revolutionize healthcare, enhance human cognition, and redefine human-machine interaction.