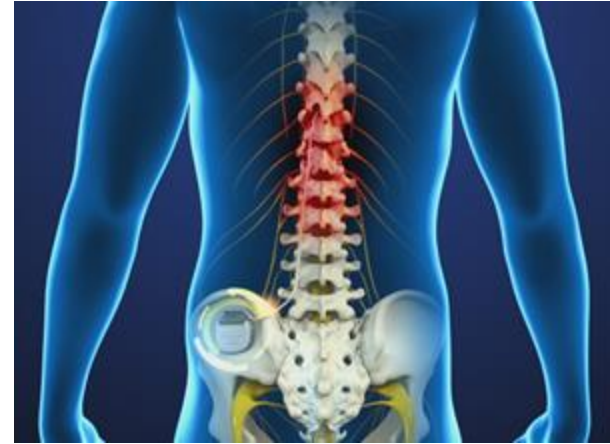


Machine Learning for Spinal Cord Stimulation Optimization

Improving Chronic Pain Management with Predictive Technology

Background:

Spinal cord stimulation (SCS) is a treatment used for chronic pain management, but determining the optimal stimulation parameters for each patient can be challenging and time-consuming. Traditional methods often rely on trial and error, which can lead to suboptimal outcomes and patient discomfort. Additionally, the effectiveness of SCS can vary significantly between patients, making it difficult for clinicians to predict which patients will respond well to the treatment. This variability in patient response and the complexity of finding the right stimulation parameters have long been obstacles in maximizing the potential benefits of SCS therapy.



Source: ypo.education

Technology:

Scientists at Albany Medical College have developed a system that uses machine learning to predict and optimize spinal cord stimulation parameters. The technology incorporates a user interface for entering features from a new patient, allowing for easy input of relevant clinical data. At the core of the system is a machine learning engine that has been trained on historical patient data and outcomes. This engine can predict the likelihood of a successful SCS outcome for a given patient based on their specific characteristics and medical history. By analyzing patterns in successful treatments, the machine learning algorithm can suggest optimal stimulation parameters tailored to each individual patient. The system serves as a decision support tool for clinicians, helping them make more informed choices about SCS treatment and potentially improving patient outcomes. This innovative approach aims to streamline the SCS parameter selection process, potentially reducing the time and discomfort associated with finding effective stimulation settings for patients with chronic pain.

Intellectual Property

US20240282459A1

Technology Readiness

Ready for Licensing

Advantages:

- Improved selection for SCS treatment
- Enhanced prediction of long-term response to SCS
- Reduction in treatment costs and invasiveness

Applications:

- Predicting candidates for treatment
- Developing support tools for physicians
- Optimizing parameters for pain management

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