BOON LOGIC CORPORATE BACKGROUNDER DRAFT

Company

Boon Logic invented a breakthrough technology in unsupervised machine learning that revolutionizes the development and deployment of artificial intelligence (AI) solutions. The next-gen Boon Nano algorithm performs data model training 1,000X faster than traditional modeling methods, making it the fastest clustering and anomaly detection algorithm in the world.

In addition to accelerating AI solution development, the company's patent pending/patented technology drives down development costs since highly-skilled, hard-to-find data scientists are not required. Therefore, organizations without the deep financial and talent resources required by traditional modeling methods are able to take advantage of AI. In doing so, Boon Logic is driving the advancement of AI anomaly detection solutions that leverage human intelligence for "decisionmaking" instead of "searching and sorting".

Incorporated in 2018, the Minneapolis, Minn.-based company has been issued five patents and two pending patents.

Market Overview

AI-based solutions are built on traditional modeling methods that are complex and involve lengthy machine training that can take months and years. In addition, these methods are expensive because they require highly-skilled, hard-to-find AI talent.

Traditional models are trained to identify known failure modes, which greatly lengthens training since —failures seldom occur. In contrast to this approach, Boon Logic's approach builds a reliable "normal operation" which creates models 1,000X faster. Also, this approach results in models that generate far fewer false alerts.

The pharmaceutical industry has used open-source machine learning algorithms for AI-based visual inspection that perform modeling in six months compared with Boon Nano that performs modeling in 37 minutes. Similarly, the use of open-source machine learning algorithms for AI-based predictive maintenance takes on average two months vs. less than a minute by Boon Nano.

AI Solutions

Boon Nano

Boon Logic's next-gen Boon Nano algorithm accelerates unsupervised machine learning and simplifies AI application development. By reducing data model training from months and years to days and significantly reducing financial investment, Boon Nano essentially enables faster, more affordable AI solution development for generating valuable insights that increase productivity, quality and safety. Its ability to unlock data patterns and anomaly detection make it perfect for virtually an unlimited number of innovative applications that fuel growth and profitability in a variety of vertical markets.

This breakthrough technology powers the company's anomaly detection-based AI solutions for:

- equipment monitoring and anomaly detection that drive predictive maintenance (AMBER)
- visual inspection that detects product anomalies to ensure product quality and integrity of the manufacturing process (AVIS)

What's more, Boon Nano's flexibility in autonomously tuning, training, and running in real-time at the device, on premise, or in the cloud makes it a practical choice as the engine for AI solution development.

AMBER

Powered by the Boon Nano algorithm that accelerates unsupervised machine learning, AMBER is an AI-based predictive maintenance and condition monitoring solution. By providing early warning when an asset is

approaching an operational deviation, AMBER reduces the likelihood of unexpected operational failure and downtime costs and extends the life of high-value equipment assets.

AMBER can be trained and deployed in hours instead of months or years without highly skilled, hard-to-find talent resources required by traditional data modeling development methods. The solution builds a reliable "normal operation" model for each asset using an autonomously configured unsupervised machine learning approach. In addition to building models faster, this approach produces far fewer false alarms.

Furthermore, as the most cost-effective solution of its kind, a greater number of organizations can take advantage of AMBER to proactively reduce operational failure that's often tied directly to service level agreements or site-level uptime objectives. With AMBER hedging the risk of high-value asset failure, companies also can avoid redundant capital equipment costs failed.

AVIS

Powered by the Boon Nano algorithm that accelerates unsupervised machine learning, AVIS is the first automated visual inspection solution for parenteral pharmaceutical inspection, including glass vials, plastic bottles and ampoules. The retrofit machine replaces the human element in semi-automated inspection, resulting in:

- 11.9 percent increase in production capacity
- 40 percent fewer false accepts
- Less than 1 percent false reject rate

AVIS self-trains from a normal, defect-free product in less than one hour and can be installed in one day—a fraction of the time it takes traditional computer vision or neural network/deep learning technology. Therefore, AVIS is ideal for pharmaceutical manufacturers of higher-mix, lower-volume products unlike other expensive automated systems that can't be easily and quickly modified for different product types.

Another environment benefiting from AVIS is image sensor manufacturing. Instead of relying on error-prone, time-consuming human inspection, sensor, AVIS reduces human inspection time from 40 minutes to two minutes. In addition to significantly lowering production costs, AVIS' accuracy ensures product quality.

GE Healthcare results:

- 88% fewer false rejections
- 22% increase in output
- 2.5-person reduction per retrofitted inspection machine

Clients

GE Healthcare
Great Lakes Dredge and Dock

Management (Bios)

Grant Goris, CEO

A strategic thinker with an extensive background in analytics, Mr. Goris understands artificial intelligence and the market opportunities that are ripe for unsupervised machine learning. In addition, he has a firm grasp on how to apply the Company's core technology for use in a variety of vertical markets and is adept at evangelizing its advantages.

Dr. Brian Turnquist, CTO

Dr. Turnquist has applied his Ph.D. in Mathematics to amassing 25 years of experience in machine learning and neuroscience and leveraging early artificial intelligence (AI) in the study of biological signal processing. He has a long list of articles that have been published in refereed journals and is considered a thought leader in machine learning. In addition, he has a background in research at Johns Hopkins, Yale, University of Minnesota, and the German universities of Heidelberg and Nurnberg.

Media Contact
Lis Grant
lis@schwegmancommunications.com
612-599-7797