



Machine Learning Case Study

Deep learning for bacteria specie identification

About Bioavlee



Bioavlee is a bio-tech company that creates their own devices for the laboratory market. Thanks to proprietary patents and constructions, they redefine the way of identifying microorganisms. The portfolio of their projects includes a number of modern laboratory devices. By setting new standards on the market, they make laboratory work more accurate, faster, cheaper and simpler.

THE CHALLENGE

Bioavlee required a significant rework of a machine-learning model behind one of their key products. With the expanding client base and growing number of examined bacteria species their existing model did not work well. They started looking into the newest achievements in deep learning and recognized the opportunity.

THE SOLUTION

In 4 months CodeWave's data science team was able to deliver a trained deep learning model, built on roughly 200 000 samples and based on a state-of-the-art neural network architecture. Utilizing AWS Spot instances with multiple GPUs we were able to iterate & test quickly while keeping the cost down.

THE BENEFITS

Better performance

The applied ML model is able to identify the required specie with an error less than 1%.

High scalability

The inference pipeline enables scalable recognition for Bioavlee's clients.

Low cost

Utilizing AWS Spot instances we delivered the model at a fraction of the regular price.

ABOUT CODEWAVE AND AMAZON WEB SERVICES

CodeWave is a performance- and scalability-focused web development firm. We deliver custom software solutions and operate cloud-based infrastructure for clients across the globe - from startups to Fortune 500s.

AWS provides strong machine learning capabilities on the cloud and a rich APN Partner community to help you unlock new business value and serve customers.

NEXT STEPS

To learn more about how AWS and CodeWave can help your business, visit codewave.eu