

Nuance's AI Marketplace Delivers AI at Scale with Industry's First Workflow-Integrated Market for Diagnostic Imaging Algorithms

Collaborative community of developers, publishers, data scientists, and radiologists can seamlessly create, distribute, and utilize continuously learning algorithms for 25,000 radiologists across 5,500 connected healthcare facilities

CHICAGO, IL., Nov. 26, 2018 – At the Radiological Society of North America's (RSNA) 104th Scientific Assembly and Annual Meeting, [Nuance Communications, Inc.](#) (NASDAQ: NUAN) today announced that, in less than [one year since its introduction](#), the Artificial Intelligence (AI) Marketplace for Diagnostic Imaging ("[AI Marketplace](#)"), the first workflow-integrated marketplace, has mobilized a collaborative community of developers, researchers and technology leaders to build, test, validate and share algorithms for radiology. The AI Marketplace now has more than [40 developers](#) such as NVIDIA, Aidoc, Zebra Med, Aidence, Densitas, Massachusetts General Hospital (MGH), Brigham and Women's Hospital (BWH), and their Center for Clinical Data Science (CCDS). Nuance also is working with standards bodies, such as the American College of Radiology (ACR), to establish and apply application program interface (API) connectivity standards for the consumption of AI within radiology workflow, as well as electronic health records (EHRs), picture archiving and communication systems (PACS) and registries.

The AI Marketplace functions as a diagnostic imaging app store, giving developers immediate access to 70 percent of all radiologists across 5,500 healthcare facilities via the existing connected Nuance network. Unlike other imaging AI platforms, marketplaces, and exchanges, Nuance's comprehensive AI Marketplace offers unmatched speed to market, unparalleled access to users at scale, continuous algorithm training for developers across the broadest set of distributed data sources, and automated access to required registries. For subscribers, the AI Marketplace offers one-stop-shopping in the largest storefront of AI imaging algorithms integrated directly into the radiology reporting workflow, with a collaborative feedback channel to ensure superior results based on a wide array of real-world use.

"Augmenting radiologists' expertise with AI is not futuristic, foreboding, or frightening. It's happening now and offers immediate and ongoing benefits. Just as the Apple iOS App Store changed how we used and viewed smartphones, the AI Marketplace can deliver a similar transformation to the quality of care," said Karen Holzberger, vice president and general manager, Healthcare Diagnostics, Nuance. "With our deep understanding of radiologists' needs and workflows and the scale of our existing solutions, we are uniquely positioned to help them lead the transformation of healthcare by leveraging the capabilities of AI. Now, with the ability to easily purchase and utilize AI algorithms directly within the solutions they use every day, radiologists can work smarter and more efficiently, focusing their time and expertise on more sophisticated activities and urgent cases, ultimately improving patient care, and saving more lives."

The AI Marketplace benefits developers and subscribers in unparalleled ways:

Developer benefits:

- **Speed to market**: Significantly improve speed and reduce cost to bring imaging AI applications to market by easily publishing to the AI Marketplace and eliminating the sales, marketing, and legal costs normally required to reach the radiology community, in one easy step.
- **Market at scale**: Gain immediate visibility and access to an audience of 70 percent of all radiologists across 5,500 healthcare systems.
- **Continuous learning**: Constantly train and improve AI algorithms at scale to the specificity and variation of a wide array of client settings with automated access to real-world performance results and data across the

broadest user base.

- [Automated connection to registries](#): Leverage existing connectivity to the ACR to apply standards and help with automated reporting and post-market surveillance requirements.

Subscriber benefits:

- [One-stop shopping](#): Gain instant access to the largest storefront of AI algorithms in medical imaging that allows subscribers to search for algorithms by modality, body part, types of disease, and more vs. having to track vendors on multiple websites. Avoid the cost and complexity of installing multiple AI developer environments, signing multiple BAAs, and other time-consuming tasks.
- [Efficient workflow integration](#): Automatically leverage the outputs of AI algorithms to drive superior workflow routing and efficiency, and seamlessly integrate AI generated findings into existing PowerScribe reporting templates to further augment radiologist productivity, quality, and decision support. No extra steps, screens, or mouse clicks – and all within the same systems relied on every day.
- [Continuous feedback and training](#): Gain trust in the specificity and sensitivity of algorithm results through broad-scale use and automatic sharing of performance across health systems with ‘try-before-buy’ testing ability.

Examples of the AI Marketplace in action include:

- Aidoc, Nuance, and the University of Rochester are collaborating on a potentially life-saving worklist prioritization application. The FDA-cleared application analyzes CT exams indicating a suspected intracranial hemorrhage, then prioritizes them on the [PowerScribe Workflow Orchestration](#) worklist for a radiologist’s immediate attention in cases when time-to-treatment is critical.
- Aidence, eUnity, Nuance, and the University of Pennsylvania are collaborating on the development of an application to assist radiologists in the time-consuming task of detecting and characterizing pulmonary nodules for reporting and follow-up comparisons. The Aidence Veye Chest algorithm can detect, measure, and characterize lung nodules in CT exams. It also can compare lung nodules in follow-up exams to assess changes. The accuracy of Aidence’s automated nodule diameter and volume measurement, growth rate, and composition have been validated in a clinical study at NHS Lothian and the University of Edinburgh. Aidence’s Veye Chest application has received a CE mark but is not yet cleared by the FDA for clinical use.
- Zebra Med’s Coronary Calcium Scoring application checks for calcium buildup in the coronary arteries. Calcium in these arteries may be a sign of heart disease. Zebra has developed several algorithms that are designed to help institutions uncover incidental findings across a patient population that have meaning and potential impact on risk stratification. The Coronary Calcium Scoring application is intended for value-based institutions that hold preventative methodologies as a priority.
- Densitas’ FDA-cleared densitasdensity™ application automatically assesses breast density, an important predictor of breast cancer risk, while radiologists focus their time and attention on finding breast cancer. The densitasdensity algorithm can analyze images to provide consistent and reproducible breast density grades that align with the ACR’s 4th or 5th edition breast density scales. The application is intended for use with compatible full-field digital mammography systems.

AI Marketplace: A collaborative community, development environment, and market

Nuance is working with the ACR to establish and apply API connectivity standards for the consumption of AI within radiology workflow, as well as EHRs, PACS, and registries.

The AI Marketplace also combines the power of NVIDIA’s deep learning platform with Nuance’s [PowerScribe](#) radiology reporting and [PowerShare](#) image exchange network. This combination creates a unique end-to-end methodology that enables widespread development and rapid deployment of imaging AI models into the AI Marketplace, which is then integrated into thousands of radiologists’ downstream workflow, helping them quickly detect key clinical findings and improve patient care.

“The NVIDIA Clara computing platform powers scalable inferencing of applications to the Nuance AI

Marketplace. NVIDIA's AI computing platform is available everywhere, which gives the AI Marketplace maximum flexibility, allowing health systems to keep their data securely on premise, or to take advantage of AI computing in the cloud," added Holzberger.

"Medical imaging is essential for delivering the best healthcare," said Abdul Hamid Halabi, Healthcare Lead at NVIDIA. "By working closely with Nuance, we are connecting the world's AI developers to scalable and seamless deployment of AI applications for radiology and creating the industry-wide synergy required to realize the potential for AI to transform the diagnosis, detection, and treatment of disease."

Interested developers, publishers, data scientists, radiologists, and other members of the healthcare community can [click here](#) to get started or learn more about the AI Marketplace.

The Nuance AI Marketplace at RSNA18

Nuance will demonstrate the AI Marketplace at booth #2700 in South Hall A at McCormick Place, November 25 – 30 in Chicago, IL. NVIDIA's Clara universal computing platform, integrated within the AI Marketplace, also will be on display.

RSNA18 attendees can receive detailed information about the AI Marketplace directly from the industry's top AI radiology experts. For example, Warren B. Gefter, MD, Professor of Radiology at the Hospital of the University of Pennsylvania, will present the session, "Using AI within existing radiology workflows", in the Machine Learning Showcase (ML16) in the North Hall, Monday, November 26, at 2:00pm.

About Nuance Healthcare

Nuance provides intelligent systems that support a more natural and insightful approach to clinical documentation, freeing clinicians to spend more time caring for patients. Nuance healthcare solutions capture, improve and communicate more than 300 million patient stories each year, helping more than 500,000 clinicians in 10,000 global healthcare organizations to drive meaningful clinical and financial outcomes. Nuance's award-winning clinical speech recognition, medical transcription, CDI, coding, quality and medical imaging solutions provide a more complete and accurate view of patient care.

About Nuance Communications, Inc.

Nuance Communications, Inc. (NASDAQ: NUAN) is the pioneer and leader in conversational AI innovations that bring intelligence to everyday work and life. The company delivers solutions that can understand, analyze and respond to human language to increase productivity and amplify human intelligence. With decades of domain and artificial intelligence expertise, Nuance works with thousands of organizations – in global industries that include healthcare, telecommunications, automotive, financial services, and retail – to create stronger relationships and better experiences for their customers and workforce. For more information, please visit www.nuance.com.

Trademark reference: Nuance and the Nuance logo are registered trademarks or trademarks of Nuance Communications, Inc. or its affiliates in the United States and/or other countries. All other trademarks referenced herein are the property of their respective owners.

Media Contact Information

Palmer Reuther

Corporate Communications

Nuance Healthcare

M: 978-697-9227

palmer.reuther@nuance.com

<https://news.nuance.com/2018-11-26-Nuances-AI-Marketplace-Delivers-AI-at-Scale-with-Industrys-First-Workflow-Integrated-Market-for-Diagnostic-Imaging-Algorithms>

