AI DELIVERS PRECISION RADIATION THERAPY

“The NVIDIA Inception program helps Vysioneer develop and deploy AI solutions efficiently and effectively by providing access to high-performance technology and support.”

- Jen-Tang Lu, Co-founder and CEO, Vysioneer

Precision Medicine Requires Personalized, Data-Driven Treatment

Of the millions diagnosed with cancer each year, over half receive some form of radiation therapy. Currently, that requires a time-consuming, complex, manual process of treatment planning. Additionally, the anatomy of tumors changes throughout treatment planning, delivery, and the course of radiotherapy. These manual processes and anatomic changes can lead to treatment delays and sub-optimal outcomes. Data-driven treatment planning over the course of radiotherapy is essential to achieving precision medicine.

NVIDIA Solution

Healthcare startup and NVIDIA Inception member Vysioneer uses deep learning to deliver precision radiation therapy through VBrain, its tumor auto-contouring solution. Trained on NVIDIA GPUs, VBrain automates the treatment planning process and quantifies anatomic changes over time—accelerating and helping to inform treatment plans.
Vysioneer Results

VBrain works for the three most common types of brain tumors: brain metastases, meningiomas, and acoustic neuromas. It integrates seamlessly into existing clinical workflows and processes scans in just seconds using NVIDIA GPUs for inference—speeding up the contouring task from over an hour to less than 10 minutes and reducing variability in radiation therapy.

About Vysioneer

Vysioneer, founded by Massachusetts General Hospital (MGH) scientists and Massachusetts Institute of Technology (MIT) alumni, uses deep learning-based techniques to enable precision medicine.