MEDICAL IMAGING SOLUTIONS

Improve efficiency and diagnostic quality.
Segmentation of medical images is a pivotal step in the day-to-day clinical practice.

At Future Processing, we develop medical image analysis and segmentation algorithms which benefit from both conventional image processing techniques and modern machine learning algorithms, including various deep neural architectures.

We have already applied these approaches for segmenting scans of different modalities (MR and CT) and organs – including:

- Coronary vessels
- Brain
- Lungs
- Retinal images

**BENEFITS FROM USING THIS TECHNOLOGY:**

- Fully- and semi-automatic segmentation of organs, bones and tissues.
- Specialised methods tuned for specific regions.
- Advanced algorithms calibrated and geared towards medical images.
- Delivered solutions based on years of experience in medical image analysis.

**OUR EXPERTISE**

Future Processing has more than 10 years of experience in software development for medical image processing and is experienced at working to standards required by ISO 13485.

During those years of our experience we have collaborated closely with companies and academic institutes. We have developed a range of systems and are working on next generation software which will support improved diagnosis. Algorithms created by our engineers support the rapid growth of machine learning that is taking place within healthcare, helping analyse data sets and interpret medical images using image processing techniques.

WITH OUR PARTNERS, WE HAVE CREATED AND ARE STILL WORKING ON:

**CAMBRIDGE COMPUTED IMAGING**

- Fluoroscopy systems which successfully obtained FDA 510k
- Angiography systems
- Statistical analysis system for medical data

**CENTRE OF ONCOLOGY MARIA SKLODOWSKA-CURIE MEMORIAL INSTITUTE IN GLIWICE**

- The ECONIB project (Enhancing the diagnostic efficiency of dynamic Contrast-enhanced imaging in personalised Oncology by extracting New and Improved Biomarkers)

**SILESIAN CENTRE FOR HEART DISEASES IN ZABRZE**

- 4D Imaging in Cardiology
IMAGING IN ONCOLOGY
Dynamic contrast enhanced (DCE) imaging using computed tomography (CT) or magnetic resonance (MR) has been intensively studied to allow for assessing the vascular support of various tumors and other tissues.

In the ECONIB project we seek to interpret every single bit of information that can be extracted from the dynamic imaging.

We are working on a comprehensive system that will allow for segmenting DCE images, extracting and analysing DCE biomarkers and will implement convenient data re-processing modules with the intention of bringing it into standard clinical workflow to deliver value not only to clinicians but - most importantly - to patients.

4D IMAGING IN CARDIOLOGY
Cardio4D is a computational platform increasing the efficiency and efficacy of medical imaging in patients suffering from cardiovascular diseases.

This non-invasive method is aimed to help physicians better analyse 3D angiograms by revealing the 4th dimension: detailed information about flow conditions in the patient’s cardiovascular system.

Advanced algorithms from computational physics, machine learning and image analysis will support clinicians in diagnosis and decision making. This will enhance the conventional angiography by revealing information previously unavailable or difficult to obtain like from IVUS or FFR.

BENEFITS FROM USING THIS TECHNOLOGY:
- Enhancements in diagnostic & prognostic efficiency of DCE.
- Improved medial image segmentation.
- Hands-free processing.
- Convenient re-analysis.
- Flexibility & reproducibility.

BENEFITS FROM USING THIS TECHNOLOGY:
- Fully non-invasive investigation.
- Localization of regions likely to develop atherosclerotic plaques.
- Estimation of stability and hemodynamic significance of existing plaques.
- Possibility to perform in-silico perfusion scintigraphy, IVUS and FFR.

SUMMARY
Future Processing is working on ground breaking, innovative developments in software to improve medical imaging and data management to improve decision making by clinicians and enhance patient outcomes.

We look forward to working with you and discussing how we can support your medical imaging needs.
ABOUT US

Future Processing is an experienced Polish offshore software development service provider, working mostly with European companies located in the UK and Scandinavia.

In 2000 the company was founded and is still led by Ernst & Young Entrepreneur of the Year Award finalist Jaroslaw Czaja. Since then, we have grown from a group of few friends into a team of over 750 people who undertake ambitious technology and business ventures.

Being a software development company, we recognise that complicated problems often require solutions that bring together the strengths of many disciplines. Therefore, our team at Future Processing has a broad range of expertise in a variety of fields and industries.

CURRENT CLIENTS

50+

CURRENT PROJECTS

60+

EMPLOYEES

750+

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