Partnering for advanced AI solutions in medical image and signal analysis

Summary

Profile type
Technology offer

Company's country
Austria

POD reference
TOAT20241111012

Profile status
PUBLISHED

Type of partnership
Commercial agreement with technical assistance

Research and development cooperation agreement

Targeted countries
• World

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Term of validity
11 Nov 2024
11 Nov 2025

Last update
11 Nov 2024

General Information

Short summary

An Austrian research center specializing in machine learning for automated medical image and signal analysis offers expertise in developing advanced algorithms and software modules in this field.

Full description

The center, recognized as a national center of excellence, is funded by a national program to drive translational research in medicine. It has a strong focus on stroke diagnosis, prevention, and rehabilitation, and recently established a dedicated department for medical data science.

The research center's data science department comprises a highly skilled, interdisciplinary team of scientists in mathematics, computer science, and medical engineering. With expertise in artificial intelligence (AI) and machine learning, including deep learning and computer vision, the team focuses on processing and analyzing medical images.

The research group actively pursues a range of projects utilizing both supervised and unsupervised machine learning methods. These projects include:Image segmentation (e.g., tumor detection, brain infarct, and plaque segmentation) ,Cross-modal image registration
Image reconstruction (tackling inverse problems and reconstructing from undersampled data), Generative AI (such

as generating synthetic data and augmenting cohorts for training data across multiple medical imaging modalities), predictive modeling and multi-modal data analysis.

Beyond foundational research, the team specializes in the algorithmic implementation of new models, maintaining close collaboration with medical experts throughout the process.

In addition to project expertise, the team possesses extensive experience in developing medical software that complies with strict regulatory standards. They are adept in ISO 13485 and IEC 62304, ensuring that all software solutions meet regulatory requirements for safety, performance, and reliability. This commitment underscores their dedication to delivering high-quality, compliant medical device software for the healthcare industry.

Advantages and innovations

Operating in a diverse, interdisciplinary environment, the research group values dynamic idea exchange and close collaboration with experts from medicine, technology, and various other fields. This collaborative approach enables them to develop innovative solutions addressing complex technical and medical challenges. Their mission is to push the frontiers of medical imaging while creating practical solutions that ultimately improve patient health.

Technical specification or expertise sought

The research center's data science department seeks collaboration with companies and scientific partners interested in AI for medical image and signal analysis. They are especially keen to work with partners in the medical field or in medical software development who are looking to incorporate AI-driven technologies or enhance their algorithmic data processing pipelines to improve and automate workflows.

The partnership offering includes opportunities for contract research or joint projects under collaborative funding arrangements. The research group is committed to providing its expertise to achieve advances in AI-driven medical image and data processing, delivering innovative AI solutions that automate time-intensive and error-prone processes.

Stage of development

Concept stage

Sustainable Development goals

- **Goal 4: Quality Education**
- **Goal 10: Reduced Inequality**
- **Goal 3: Good Health and Well-being**
- **Goal 5: Gender Equality**
- **Goal 17: Partnerships to achieve the Goal**
- **Goal 9: Industry, Innovation and Infrastructure**
- **Goal 8: Decent Work and Economic Growth**

IPR Status

No IPR applied

IPR Notes

IPR Notes

Partner Sought

Expected role of the partner

The research center welcomes collaboration with partners from both the private and public sectors, including companies, R&D institutions, and research centers focused on medical innovation. They are especially interested in working with partners seeking support to develop custom AI algorithms to address diverse scientific challenges in the medical field, as well as in the development of software as a medical device.

Type of partnership

Commercial agreement with technical assistance

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Type and size of the partner

- **University**
- **SME 50 - 249**
- **SME <=10**
- **R&D Institution**
- **SME 11-49**
- **Other**
- **Big company**

Dissemination

Technology keywords

- **01003003 - Artificial Intelligence (AI)**
- **01003012 - Imaging, Image Processing, Pattern Recognition**
- **06001012 - Medical Research**
- **01004001 - Applications for Health**
- **01005005 - Information Filtering, Semantics, Statistics**

Market keywords

- **05007006 - Computer-aided diagnosis and therapy**
- **05005021 - Medical computer sciences**
- **05002001 - X-rays**
- **02007016 - Artificial intelligence related software**
- **05002005 - Other medical imaging**

Targeted countries

- **World**

Sector groups involved