



Introducing VASCage's New Data Science Team for Medical Data Analysis

We are pleased to announce the formation of VASCage's new Data Science team, with a dedicated focus on medical data, particularly in the areas of medical images and signals. This team is poised to enhance the application of machine learning (ML) and artificial intelligence (AI) in medical diagnostics and treatment planning.

Expert Consulting and Prototyping for Medical Data Challenges

Our new Data Science team offers specialised consulting and prototyping services tailored to the complexities of medical data. These services are designed to help healthcare organisations enhance their use of ML and AI technologies for improved patient outcomes.

Key offerings include:

- **Architectural Consultation:** Customising AI system designs to meet the specific needs of medical applications, ensuring both robustness and scalability.
- **Data Integration and Fusion:** Advising on the combination of data from multiple imaging modalities to improve diagnostic accuracy.

- **Training Optimization:** Refining training processes to boost the efficiency and accuracy of medical diagnostic models.
- **Performance Improvement and Validation:** Ensuring AI tools meet clinical standards and effectively contribute to better health care delivery.

Successful Projects

Although our Data Science team is newly established, the members bring extensive past experiences. They have previously led pioneering projects in the following areas, demonstrating the broad expertise of our team:

- **AI for Fast Reconstruction of MR Images:** Enhancing the quality and speed of MR imaging through advanced AI algorithms.
- **AI for Advanced Automated Segmentation of 3D Images:** Precisely detecting and segmenting very small structures within 3D medical images.
- **Generative AI to Improve Medical Image Training Data Sets:** Using AI to generate high-quality training data, improving the accuracy of medical imaging models.
- **Predictive Modelling:** Developing predictive models to assist in diagnosis and treatment planning, leveraging vast amounts of medical data.
- **Morphological Analysis of Anatomical Structures:** Providing detailed insights into complex anatomical features using advanced image processing techniques.
- **Signal Analysis of ECG, PPG, and BCG Signals:** Applying sophisticated algorithms to analyse cardiovascular signals for improved diagnostic accuracy.

Commitment to Regulatory Compliance and Software Excellence

In addition to their project experience, our team possesses extensive know-how in software as a medical device, adhering to stringent standards. They are proficient in meeting requirements set by ISO 13485 and IEC 62304, ensuring that our software solutions are not only effective but also fully compliant with regulatory expectations for safety and performance. This expertise underscores our commitment to delivering high-quality, reliable medical device software that meets the critical needs of the healthcare industry.

A Broad and Experienced Team

Our team is composed of mathematicians, computer scientists, regulatory experts and clinicians, all dedicated to supporting our customers in medical image processing and analysis. Our collective expertise and extensive experience in machine learning, including deep learning, enable us to provide fast, efficient, and objective assessments of large image data sets.

Why Choose VASCage's Data Science Team?

Our newly created team combines deep technical expertise in AI and ML with a nuanced understanding of the regulatory and operational landscapes of the medical sector. This unique blend makes us a valuable partner for institutions looking to integrate sophisticated data science solutions into their practices.

The Road Ahead

While the data science team's web presence is currently under preparation, we are eager to engage with potential clients and partners. Whether you are looking to start a new project or scale an existing one, our Data Science team is ready to assist you in navigating the complexities of AI implementation and optimization.

For any inquiries or further information, please do not hesitate to reach out to karl.fritscher@vascage.at, who will be happy to guide you through our services and discuss how we can support your objectives.

We look forward to working together to advance the field of medical data science, driving improvements in healthcare through innovation and expertise.