Fraunhofer

IMW

Fraunhofer Center for International Management and Knowledge Economy IMW

Neumarkt 9-19
04109 Leipzig

Contact Persons

Carolin Brinkmann
Research Fellow
Unit Price and Service Management
carolin.brinkmann@imw.fraunhofer.de
Phone: +49 341 231039-248

Dr. Agnes Vosen
Research Fellow
Unit Price and Service Management
agnes.vosen@imw.fraunhofer.de
Phone: +49 341 231039-233

www.imw.fraunhofer.de/en.html

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AI BASED SERVICES: IDENTIFICATION OF SYMPTOMS FOR EARLY DIAGNOSIS OF PSORIATIC ARTHRITIS AND AXIAL SPONDYLOARTHRITIS

Background

When referring patients to a specialist via the primary care provider (general practitioner / orthopedic doctor), suspected immunological diseases such as psoriatic arthritis and axial spondylarthritis often lead to delays and a high workload for medical professionals because of the incorrect allocation of patients. There is no strategy to evaluate unstructured findings in a targeted manner and to increase the probability of correct allocation by recognizing a specific pattern of findings.

Projektbeschreibung

Methods focused on machine learning and data sciences are used in close cooperation with medical expertise in order to reduce the workload:

- Unstructured data packets are structured using machine learning methods such as text mining
- Findings are recognized and linked after digitization
- An indication-specific algorithm is developed that evaluates the characterization of disease phenotypes from various sources (text, laboratory and imaging)

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A demonstrator of the algorithm will be developed using historical data packages. With the help of a prospective clinical study at three locations, it will then be validated and adapted in Germany.

Project Tasks

As a socio-economic partner in the project, the Fraunhofer IMW team focuses on the aspects of user-centering and exploitation. In workshops with specialists, they analyze the prototype with a focus on usability. The use of artificial intelligence indicates possible savings potential and increases in efficiency.

Project Partners:
Fraunhofer IAIS, IME and IGD
Rheumatism center Ruhr area, Herne
Charité – Universitätsmedizin Berlin,
Department of Rheumatology and
Clinical Immunology

Client:
Fraunhofer Cluster of Excellence for
Immune-Mediated Diseases CIMD

Project Page:
www.cimd.fraunhofer.de

Project Duration:
1.6.2020–31.3.2021