

One Pager FUSE-AI

Company Profile and Product

Company	FUSE-AI UG (haftungsbeschränkt)	Date of Foundation	29.08.17
Address	Großer Burstah 46/48 20457 Hamburg Tel: 040 / 450 318 - 0 Fax: 040 / 450 318 - 18	Contact	Maximilian Waschka mw@fuse-ai.de www.fuse-ai.de www.sherlog.ai
Websites			
Executive Summary			
<p>We develop AI-based Computer Assisted Diagnosis (AI-CAD) Systems for physicians. Our AI-CAD reduces false diagnoses in the evaluations of medical images while also automating time intensive aspects in the documentation of findings. Our assistance systems are going to be available for physicians in the form of SaaS on www.sherlog.ai and other platforms (e.g. AiCura). Additionally, we expect to produce revenue through licensing our software to producers of radiological software or manufacturers of medical imaging technology. Gradually FUSE-AI is going to develop software solutions for various indications in different techniques of medical imaging, using technical expertise with methods of transfer learning in a highly beneficial way.</p>			
Product: ProstateCarcinoma.ai (Status: Prototype Development)			
<p>Challenge: The analysis of multiparametric MRIs (mpMRI) of the prostate is time consuming (>20 min), prone to error (false-negative-rate 11 %, false-positive-rate 27%) and the quality of findings depends to a large degree on the radiologist's experience. Unnecessary treatment and the consequential complications as well as too-late recognition of tumours and reduced chances of a successful treatment process are the results of these false diagnoses.</p> <p>Solution and customer benefit: Our software ProstateCarcinoma.ai is based on artificial neural networks. The software gives an independent second opinion on the detection of abnormalities, generates markers, conducts measurements and automatically transfers them into a 2D- and 3D-representation. Thus, the documentation of findings can be expedited and the risk of false diagnoses can be reduced. Urologists and oncologists also benefit from a thorough digital documentation: The reports of ProstateCarcinoma.ai include detailed areal information on conspicuous lesions, which is advantageous in the planning of radiotherapy.</p> <p>USP: Aside from the fact, that we use high-quality data, of which the validity is secured through MRI-based biopsy, the training data set does not only represent the typical clinical average, but also includes rare and atypical cases. Consequently, the software can especially detect the cases, which are less familiar to the radiologist's eye. As a cloud based solution, the software is compatible with various PACS/RIS and can be implemented into the teleradiology infrastructure.</p> <p>Technology: Our biggest asset is the FUSE-AI Library (Falib). In the library we document self-developed analysis workflows and extended knowledge, which exceed standardised methods of Machine Learning and Deep Learning. These can be applied for different medical image analysis tasks.</p> <p>Market: Every year 60.000 men in Germany develop prostate cancer, while the number of suspected cases amounts to 600.000. In about 100.000 – 150.000 cases annually mpMRI are conducted for diagnosis. Physicians receive around 800 € from private health insurances. For the utilisation of ProstateCarcinoma.ai we calculate a fee of 10 € per analysis. With the guideline alteration 2018, the mpMRI examination of the prostate has been included in the statutory health insurance's catalogue of benefits, which makes a growth of this specific market probable.</p> <p>Partners: radprax MVZ, AiCura, Open Telekom Cloud, Westdeutscher Teleradiologieverbund</p> <p>Resources Needed: We are looking for further partners, who would like to support us with an increase in training data. Furthermore, we are looking for partners to support us in the clinical evaluation as part of the approval of our software as a medical product.</p>			
Management & Team (Personal Background / Experience)			
<p>Matthias Steffen (Founder, CEO): Experience as CEO of an agency for digital communication with in-depth knowledge and a comprehensive network in healthcare.</p> <p>Maximilian Waschka (Founder, Product Owner): Experience in project management und marketing</p> <p>Dr. Sabrina Reimers-Kipping (Founder, Head of Medical Advisory): Biochemist with experience in marketing/business development</p> <p>Prof. Dr. Hans Joachim Krebber, (Founder, Investor): Heart surgeon with extended network in healthcare</p> <p>Dr. Dirk Schäfer (Machine Learning Engineer): PhD in Deep Learning and Machine Learning, Experience in IT administration and mobile app development</p> <p>Dr. Jens Hocke (Machine Learning Researcher): PhD in Deep Learning and Machine Learning, Experience as data analyst</p> <p>Dr. Katja Allesch (Advising Radiologist): Medical Specialist in Radiology</p>			