# MEDICALgorithmics

INNOVATIVE SOLUTIONS IN MEDICINE

Through creating technological innovations we change the face of medicine to improve the lives of patients.

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### INNOVATIVE SOLUTIONS IN MEDICINE

**Medicalgorithmics** is a global technological company pioneering novel cardiac monitoring and rehabilitation systems to enable telemedicine. We believe in the power of meaningful innovation. Through identifying unique challenges and medical needs we design products that improve the care of heart patients. Our multidisciplinary team of researchers and developers combine algorithms, software and product design to develop truly breakthrough technological solutions.

# Leading the way in remote cardiac monitoring



**Driving significant global growth**

**2 000 000 hours**
of heart monitoring

**15 years**
of medical devices expertise

**11 granted**
patents

**+100 000 patients**
monitored yearly

**+2 000 physicians**
using the technology worldwide

# Our products

People worldwide are living longer thanks to advances in modern medicine. However, an aging population means an ever-growing need for more specialized care and technology to manage the increased complexities of health conditions, particularly related to cardiovascular diseases. Medicalgorithmics, a long-time leader in remote cardiac monitoring technology, is meeting that challenge in the global marketplace.
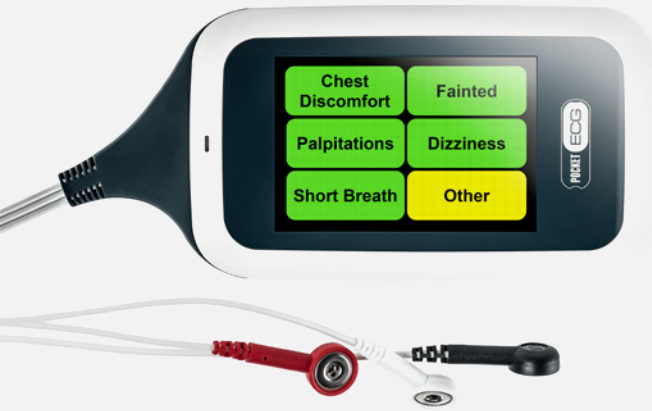
## Arrythmia diagnosis

The Medicalgorithmics flagship product is PocketECG, a system for heart arrhythmia diagnostics with the highest diagnostic yield when comparing to other monitoring technologies. It has been successfully used by patients worldwide for over 10 years, and has become one of the most popular systems for long-term online heart monitoring.

More: **www.pocketecg.com**

## Cardiac rehabilitation

PocketECG CRS, a system for cardiovascular telerehabilitation which can be used in hospitals, clinics as well as at the patient's home. The system sends the complete record of a patient's ECG and heart rate in real-time during the rehabilitation session to a physician or physical therapist. Audible and visual messages help the patient control a workout's intensity so that it safely contributes to their rehabilitation.

More: **www.pocketecgcrs.com**

# Be a part of our success!

# Bringing innovations to medicine

Medicalgorithmics, a leader in non-invasive heart monitoring technology, is the creator of the PocketECG system for diagnosis of heart arrhythmia.

Its products include PocketECG for arrhythmia diagnostics, and PocketECG CRS for cardiac rehabilitation. Most recently, the company unveiled ECG TechBot, an AI-enabled software that runs the automated interpretation of an ECG signal from any electrocardiographic test.

Medicalgorithmics works collaboratively with scientific communities in the advancement of medical research and discovery. Through the cooperation with the Harvard-MIT Division of Health Sciences and Technology the company's algorithmic solutions have contributed to the development of PhysioNet, a network of databases of physiologic signals utilized by scientists and engineers to develop IT technologies for medicine.



Medicalgorithmics' products are available worldwide. Founder Marek Dziubiński, Ph.D., also serves as the company's CEO and Chief Technology Officer. Mr. Dziubiński leads the organization's research efforts, and most recently shared his research "Monitoring Duration vs Diagnostic Yield in Patients with Paroxysmal Atrial Fibrillation" at the 2018 Heart Rhythm Scientific Sessions, in Boston, Massachusetts.

More on the research's results: **pocketecg.com/hrs2018**

# Our technology: Designed to do more

## PocketECG cardiac monitoring process

### Monitoring
*Collecting data*

During an up to 30 days monitoring session PocketECG continuously tracks the patient's activity through the built-in accelerometer. The device's interactivity and its touch screen enable the patient to directly provide information about the type of symptoms while experiencing them. The diagnosis is made in the shortest possible time, and the doctor can start treatment of the patient.

### Analyzing
*Processing data*

During an online monitoring session, the data is analyzed by advanced algorithms and flows continuously to the monitoring center. By analysing the full disclosure, near-real-time ECG signal generated during an up-to-30-day period, the physician can decide to extend or stop the session, eliminating the reporting lag time of other available monitoring technologies.

### Report
*Data summary*

Urgent, daily and cumulative reports are received by the physician, and an end-of-study report is provided right after the session ended. The report includes statistical data, including extremes for each arrhythmia – the fastest, slowest, or longest parts, as well as burden for each arrhythmia type. It also presents the correlation between arrhythmia, physical activity and the reported symptoms.

## Data experts for your business

### Highest diagnostic yield
PocketECG has the highest diagnostic yield among arrhythmia monitoring solutions.

### Unique data
Our technology collects more data and detects more arrhythmias / measures more parameters than other solutions.

### Most sophisticated AI technology
We are the data experts - we have artificial intelligence technology (based on Deep Neural Nets) and unique data that we've used to train these systems.

### Partner for scientific research
Our technology collects more data, detects more arrhythmias and measures more parameters than other solutions.

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