ACEMIL

INTRODUCTION

IT SERVICES

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We are a provider of hardware and software solutions with a high level of expertise.

We provide unique and innovative solutions in various areas of AI and machine learning, software development, image recognition and analysis, streaming technologies, and online education. In addition to these, we are involved in the commercialisation of hardware and software, healthcare devices and expert support for complex, bespoke projects.

SERVICES CUSTOMISED DEVELOPMENT

We support the IT needs of a wide range of businesses with our extensive, trusted partner network and experienced professionals with domain-level expertise.

Our priority areas for design, development and operation include:
- Banking, insurance and other financial systems
- Robust systems serving hundreds of thousands or millions of users and transactions (e.g. video streaming)
- Load-balanced systems, services requiring high SLA
- Logistics systems requiring continuous monitoring

By understanding business requirements, gaining an insight into the operation of complex systems, being familiar with programming methodologies, market and supplier players, we can help you to define your needs in cooperation with us as precisely as possible.

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SERVICES AI – ARTIFICIAL INTELLIGENCE

The rapid development of artificial intelligence offers exciting opportunities, and we are managing a number of research and development projects in this area.

We can provide outstanding support with our artificial intelligence developments in the following areas:

- Transport and personal security
- Behaviour pattern and weapon recognition
- Security technology
- Industrial process safety efficiency analysis
- Agricultural surveys, plant identification

Our solutions and expertise can be deployed in almost any industry, and as consultants we can help you find the best AI service in any field.

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SERVICES SECURITY TECHNOLOGY

Our core business activity involves the self-designed creation of security hardware and software. We also sell security technology products, licenses and offer IT security services.

As part of these activities, we offer and develop high security data encryption and data storage solutions, often with biometric identification components as an important part thereof. In the field of biometrics, we also develop stand-alone products, such as biometrically driven smart relay solutions.

We offer solutions in several target areas of security technology:
- Industrial security
- Data encryption, encrypted data storage, data transmission
- Biometric identification, access control
- IT security services

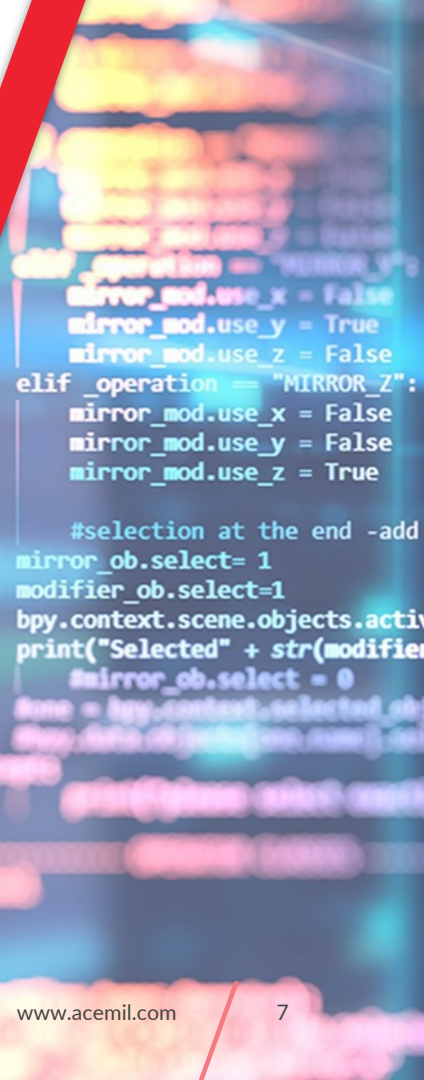ACEMIL

SERVICES CUSTOMIZED SOFTWARES 1

Complete problem solving using classic and modern software development methods.

- **Mobile and web applications:** development of native and cross-platform, Android and iOS mobile applications, as well as interactive, responsive and progressive web applications

- **Desktop applications:** development of thin and thick client-based, native and cross-platform solutions. Develop distributed business systems

- **Cloud-based solutions:** delivery and operation of business solutions built on Amazon (AWS), Google (GCP) and Azure cloud service provider platforms on a monolithic or microservice basis

SERVICES CUSTOMIZED SOFTWARES 2

Complete problem solving using classic and modern software development methods.

- **Increasing BI process efficiency through machine learning:** create time series analyses and forecasts, integrate them into BI dashboards. Using models developed using statistical learning to support your decision processes, increasing their efficiency.

- **Developing image processing algorithms:** building classification and segmentation, object recognition and tracking models. We provide solutions to your classification, clustering and segmentation challenges in your business processes using state-of-the-art machine learning methods. We also have extensive experience in developing object recognition and tracking algorithms.

SERVICES CUSTOMIZED SOFTWARES 3

Complete problem solving using classic and modern software development methods.

- **Recommendation systems:** more effective product marketing and customer targeting through content-based, collaborative and hybrid recommender systems. Based on your business data, you can sell your products to your customers more effectively through targeted, personalised recommendations. Our content-based and collaborative recommendation systems are long-term business investments to increase profits.

- **Sequence-based problem solving:** processing voice recordings, language modelling. We have extensive experience in solving voice and text-based problems. Sentiment-based monitoring of social media to track the perception of your product in the market.
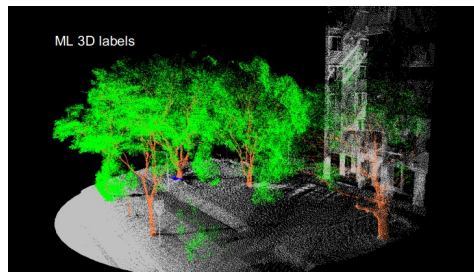
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USE CASES AI BASED TREE MORPHOLOGY

Singapore project. AI-based foliage-mass estimation based on 3D LIDAR point cloud

- Consulting on efficient annotation (data tagging)
- Machine learning based solutions using GPS, RGB photos and LIDAR data fusion modelling
- Tree identification
- Semantic segmentation of found trees (trunk, branches, foliage separation)
- Tree geometry (trunk inclination, branching point, canopy size)

One of the largest annotated tree structure databases in the world has been created.
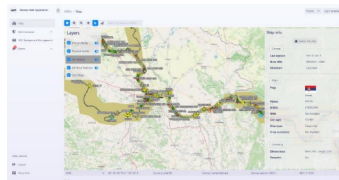
ML 3D labels

USE CASES RIVER INFORMATION SYSTEM

The RIS solution is an IT system based on data from a central VTS (River Traffic Management Centre) system, providing integrated services to other participants in river navigation.

The system is designed to support the RIS services that are available:
- increase safety (minimising incidents and accidents on waterways),
- increase efficiency (full utilisation of vessels and waterways capacity, reduction of journey and cargo loading/unloading times, reduction of fuel consumption, providing interfaces with other modes of transport),
- and the development of environmentally friendly technology (reduction of harmful emissions, reduction of damage from accidents, reduction of hazards).

One of the main objectives of the RIS is to provide a modern and environmentally friendly mode of transport, reducing hazardous emissions and the risk of accidents. Another main objective of the RIS is to improve river transport, technologies and services.

USE CASES SMART CITY MAP MATCHING

The City AI system is able to monitor the city's traffic using sensors (traffic cameras, our proprietary mobile app, inductive loops, real-time data from public transport).

From the observed data, the AI module performs traffic analysis and then predicts traffic and recommends interventions. Based on these recommendations, the user can decide to immediately change the traffic lights in the city, making traffic flow more efficient, and send notifications to the public transport company's passenger information system and mobile app.

The user can see on a map the predictions for the overall conceptual situation of the city based on historical data, traffic statistics from camera image analysis, current traffic obstacles and the position of public transport vehicles.

USE CASES SMART PARKING SOLUTION

The G-Park AI powered Smart Parking Solution is able to adapt to any situation and city layout, be it urban or rural.

Traffic, pedestrian and parking monitoring is becoming increasingly important for our urbanizing world. As communities grow, cities have to keep up with the ever increasing traffic on their streets. The G-Park AI powered Smart Parking solution offers a cost effective and modern solution for traffic management and parking monitoring.

- Accuracy – The G-Park object recognition module is able to accurately (re-)identify pedestrians, track vehicle traffic and detect license plates 99.5% of the time.
- Extendability – Extending the monitored area is as easy as adding a new camera to the network, which seamlessly integrates with the rest of the system (plug 'n' play).
- Stability – We fully commit to performing our best work to ensure the safety and stability of the system.
- Flexibility – The G-Park AI module can be run on-premises or in the cloud.