



PROFILE

Our mission: Empowering our partners for the digital age! Fraunhofer IOSB-INA is a leading research institute in the field of industrial automation, providing support on digital transformation to suppliers, mechanical and plant engineers as well as operators of automated technical systems. As a leading research institute in the field of industrial automation we support suppliers, mechanical and plant engineers, as well as operators of automated technical systems in digital transformation. Our expertise lies in the application knowledge of industrial automation, including networking, analysis, monitoring and user-friendly design of technical systems. Application knowledge of industrial automation – the networking, analysis and monitoring as well as the user-friendly design of technical systems - are our core competencies.

Our business areas:

- Industrial Internet (IIoT)
- Intelligent automation
- Assistance systems
- Cyber security in production

CONTACT

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MACHINE LEARNING

EFFICIENCY BY OPTIMIZATION, FAILURE ANALYSIS AND CONDITION MONITORING





STARTER PROFILE

- Your company seeks for first applications in industry 4.0
- You suspect company value in processdata
- You need assisntance in assessing your datasets
- You seek for new buisnessmodels depending on your data
- You want to train your personal to ?

OUR SERVICES

- shopfloor perpetration
- consultation on your specific use-cases
- assessment of your level of data acquisition in view of usecase solving
- qualifying your personal on basics of data analysis

TOPCIS

- Condition Monitoring
- Potential analysis
- Teaching & Qualifications
- Information Retrieval
- Datamining

REFERENCES

- Viafly gmbH, Paderborn: Potential analysis of machine learning methods for autonomous unmanned aerial vehicle
- Häfner & Krullmann GmbH: data-driven stabilizing of production quality

ADVANCED PROFILE

- Your company got first data analysis tools on shopfloor
- You achieved first benefits using machine learning tool
- You want your solutions for more complex scenarios
- You have a database and concrete use-cases and seek for individual algorithms
- You have a complex use-case and seek for machine learning methods to tackle your challenge

OUR SERVICES

- Expanding existing tools with highly individualized algorithms to solve even complexer tasks
- Datamining to seek advanced business models for your industrial data
- Design, develop and evaluate algorithms together with you experts to challenge your advanced use-cases

TOPCIS

- Predictive Maintenance
- Case-Based Reasoning
- Optimization

REFERENCES

- Audi AG, Ingolstadt: Condition Monitoring in automotive industry
- Miele & Cie. KG, Bielefeld: data-driven cycle time optimization

EXPERT PROFILE

- Your use-cases exceed existing business solutions
- You need scientific assistance on general tasks for your industrial use-cases
- You seek to build a demonstrator for presentation and advertisement
- Your professional data analysts need academic inputs

OUR SERVICES

- Research options to transfer promising topics into industrial scenarios (Al-concepts)
- Analyze your business and conceptualize a software parts of a demonstrator to show machine learning abilities of your products

TOPCIS

- Diagnosis
- Reinforced learning
- Self-Healing / reconfiguration

REFERENCES

- AgAVE
- Cyberdyne Systems Corporation