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20 Software AG Zementis Predictive Analytics 10.4.0.0

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23 Release Notes:

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- 25 \* A Zementis Product License Key is required in order to use Zementis  
26 Server. Please contact Software AG directly to obtain your Product  
27 License Key.
- 28 \* If you have an existing Zementis Server installation, please take a ba  
29 of artifacts uploaded in Zementis Server (Models & Resources). Sources  
30 these artifacts can be downloaded from Zementis Web Console.  
31 Alternatively, you can use the migration script available under migrat  
32 folder of Zementis 10.4.0.0 distribution package.  
33 If Zementis Server is deployed as a Java library, sources for these  
34 artifacts can be downloaded by invoking  
35 `ModelsServiceProvider.exportSource(modelName)`  
36 and `LibraryManager.exportResourceFile(name)` respectively.
- 37 \* Upgrading to Zementis 10.4.0.0 will require a clean repository store.

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40 Feature Log:

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- 42 \* New UI based on Angular framework.
- 43 \* Zementis Server available as a Docker image.
- 44 \* Enhanced support for CNNs with Pooling Layer optimizations.
- 45 \* Support for Lag Expressions.

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- 46 \* Updated REST API to support authentication tokens and license management
- 47 \* Compliance with upcoming PMML 4.4 release features:
  - 48 - Support for multiple model methods "weightedSum" and "weightedMedian"
  - 49 - Support for new MiningField@invalidValueReplacement attribute
  - 50 - Support for new Lag@aggregate attribute
  - 51 - Support for new Built-in Functions: isValid, isValid, modulo(%),
  - 52 sinh, cos, acos, cosh, tan, atan, tanh, rint, hypot, ln1p, expm1
- 53 \* Integration with Software AG Update Manager for fix delivery.

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55 Since Version 10.3:

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- 57 \* Visualize Model KPIs including memory metrics and prediction metrics.
- 58 \* Support for Anomaly Detection models based on isolation forest and
- 59 one-class support vector machines.
- 60 \* Support life-cycle operations and configuration management via SAG
- 61 Command Central.
- 62 \* Adopted Level 2 of DBP common design language.

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64 Since Version 10.2:

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- 66 \* Support for PMML representation of MobileNets, an efficient Convolutional
- 67 Neural Networks architecture for mobile vision applications.
- 68 \* Updated the REST API to OpenAPI Specification 2.0 and REST UI to Swagger
- 69 UI 3.9.0.
- 70 \* Upgraded JDK compatibility to JDK 8.

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72 Since Version 10.1:

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- 74 \* Optimized processing of large tree-ensemble models and deep learning
- 75 models.
- 76 \* New design for Zementis Web Console.
- 77 \* Portable Java client for REST services that allows full duplex streaming
- 78 for batch apply operation.
- 79 \* Improved message reporting in PMML when performing syntactic and semantic
- 80 checks.

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82 Since Version 5.0:

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- 84 \* Compatibility and automatic model conversion to PMML 4.3.
- 85 \* Support for deep learning models.
- 86 \* Support for k-NN algorithm.
- 87 \* New design for Zementis Web Console.
- 88 \* Download/upload serialized model:
  - 89 - Protect and deliver your proprietary models with Zementis without
  - 90 revealing model internals, i.e., without exposing the PMML model to

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91 3rd party

- 92 \* Model activation/de-activation at runtime:
- 93 - De-activation evicts model from JVM heap, allowing Zementis Server
- 94 to manage more models than available heap
- 95 \* Support for binary (octet-stream) data type.
- 96 \* Asynchronous processing for data residing on Amazon AWS S3 bucket via
- 97 REST/Web Service API.
- 98 \* Improved support for STATISTICA models.

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100 Since Version 4.2.5:

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- 102 \* Added support for managing custom resources via Web Service and RESTful
- 103 API.
- 104 \* Simplified Java API for easy integration with existing Java applicatio
- 105 \* Fast model upload option for PMML files that do not require comprehens
- 106 syntactic and semantic corrections.
- 107 \* Added concurrency and batch-size parameters to Zementis SOAP Web Servi
- 108 and Zementis RESTful API for batch scoring.
- 109 \* Zementis Server certified for deployment on Apache Tomcat 7.x. and 8.x
- 110 \* Compatibility and automatic model conversion to PMML 4.2.1.
- 111 \* Optimized data pre- and post-processing including input validation for
- 112 handling invalid, missing and outlier values.

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114 Since Version 4.0:

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- 116 \* Compatibility and automatic model conversion to PMML 4.2. Support for
- 117 the new features introduced in PMML 4.2, including:
- 118 - TextIndex element for text mining
- 119 - Built-in functions matches, replace and concat
- 120 - ComplexPartialScore element for Scorecards
- 121 - TargetValueStats element for Naive Bayes classifiers
- 122 - Usage type change from "predicted" to "target"
- 123 - Simplified Output element features and support for segment id for
- 124 multiple models
- 125 \* Automatic placement of Output element in a PMML file if missing and
- 126 creation of an output field to represent the predicted value.
- 127 \* Deprecated Zementis extensions to PMML 4.1:
- 128 - Built-in functions zementis:matches, zementis:replace
- 129 and zementis:concat
- 130 - Scorecard extension "PARTIAL\_SCORE\_FIELD"
- 131 \* Optimized Random Forest model processing to speed up loading time and
- 132 reduce memory footprint.
- 133 \* Added RESTful API on top of Zementis scoring engine. This feature is
- 134 available when Zementis is deployed as a server.
- 135 \* Added 'explainApply' operation to Zementis SOAP Web Service.

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137 Since Version 3.8:

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139 \* PMML conversion/correction is by-passed if an already Zementis-converted  
140 PMML file is uploaded.

141 \* Users can now upload compressed PMML file (zip/gzip). The PMML file needs  
142 to be the only entry in the zip/gzip file.

143 \* In a multiple-model, users can now access specific segment outputs from  
144 the top model.

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147 Questions/Support:

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149 If you need technical support, please visit our support site at :

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151 <http://softwareag.com/support>

152 <http://support.zementis.com>

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154 Please contact Software AG Zementis for additional assistance by visiting :

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156 <http://empower.softwareag.com/ContactSupport/>