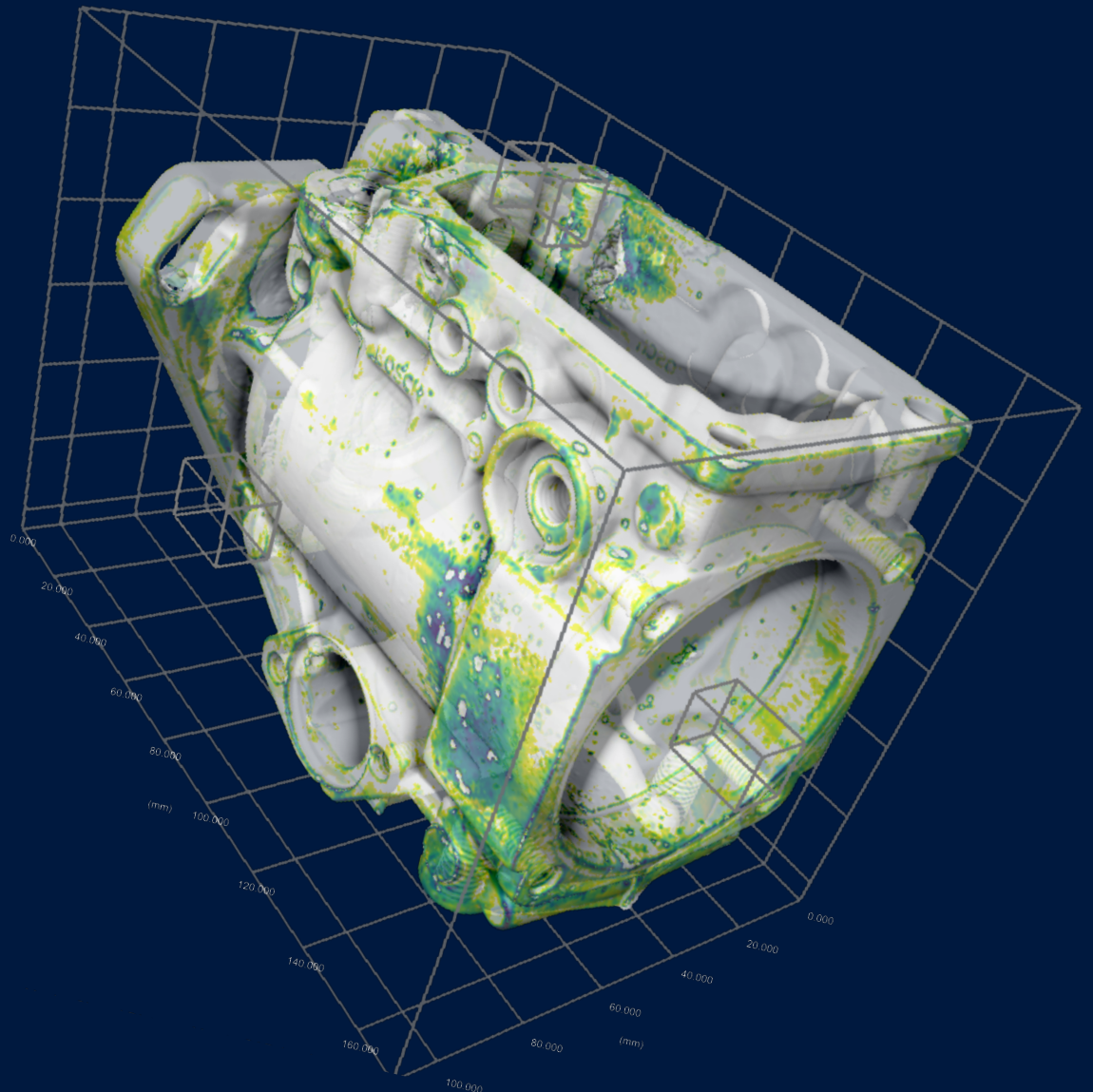


Dragonfly Academy.

Training courses.



Analyze with Confidence.

Explore our range of training courses

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3D View Hands-on Training (Beginner Level)

Duration: 1 day

Format: Instructor-led hands-on training

Prerequisites: None

This course introduces participants to the essential functionality of Dragonfly 3D View and enables them to confidently explore and inspect volumetric datasets.

Participants learn how to navigate the interface, manage sessions, visually inspect data, and produce clear visual outputs for communication and reporting. The training emphasizes practical everyday workflows rather than advanced analysis methods.

By the end of the session, participants can independently load datasets, inspect structures, and create images and animations suitable for technical documentation.

Software Requirements

Training is conducted in Dragonfly Cloud.

Participants need a laptop with a supported web browser and mouse with scroll wheel.

Course Content

Data Handling & Navigation

- Software overview and interface navigation
- Workspace configuration and preferences
- Session management
- Importing and organizing datasets
- Saving and restoring work sessions

Visual Inspection

- Navigating 2D and 3D views
- Inspection and probing tools
- Slice exploration and orientation
- Basic measurements and interpretation

Visualization & Communication

- 3D rendering techniques
- Creating images and videos
- Preparing visual outputs for presentations and reports

Guided Exercise

Participants complete a mini-project involving dataset exploration, inspection, and creation of visual outputs.

Skills Gained

After completing this course participants will be able to:

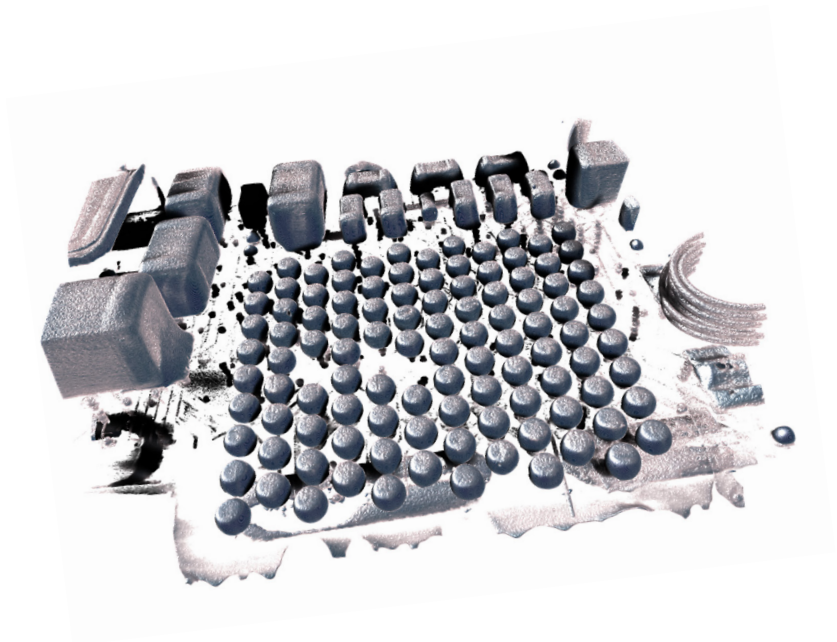
- Navigate and configure Dragonfly 3D View
 - Explore volumetric datasets confidently
 - Inspect and interpret structures visually
 - Create screenshots and animations for reporting
 - Perform basic measurements and documentation tasks
-

Typical Participants

- New users of Dragonfly 3D View
 - Engineers and researchers beginning 3D visualization
 - Application specialists performing visual inspection
 - Teams requiring fast onboarding to the software
-

Certification

Participants who attend 100% of the scheduled training duration will receive a digital Certificate of Completion issued by the Dragonfly Academy.



3D World Foundation Training (Beginner Level)

Duration: 2 days

Format: Instructor-led hands-on training

Prerequisites: None

This course teaches participants how to process and analyze volumetric image data using Dragonfly 3D World. The training focuses on constructing a complete and reproducible workflow from raw data to quantitative results and visual outputs.

Software Requirements

Training is conducted in Dragonfly Cloud.

Participants need a laptop with a supported web browser and mouse with scroll wheel.

Course Content

Day 1 - Data Preparation & Segmentation

Participants learn how to prepare datasets and extract regions of interest.

Topics include:

- Workspace navigation and session setup
- Importing image data
- Image calibration and scaling
- Noise reduction and filtering techniques
- Threshold-based segmentation
- ROI creation and refinement
- Saving and managing processing states

Hands-on exercises:

Participants segment structures from a volumetric dataset and refine the selection using multiple tools.

Day 2 — Analysis & Visualization

Participants quantify structures and present results.

Topics include:

- Measurement tools and quantitative analysis
- Object statistics and interpretation
- 3D rendering techniques
- Basic animation
- Exporting images and results
- Workflow reproducibility

Hands-on exercises:

Participants complete a guided mini-project producing measurements and visual outputs suitable for reporting.

Skills Gained

After completing this course participants will be able to:

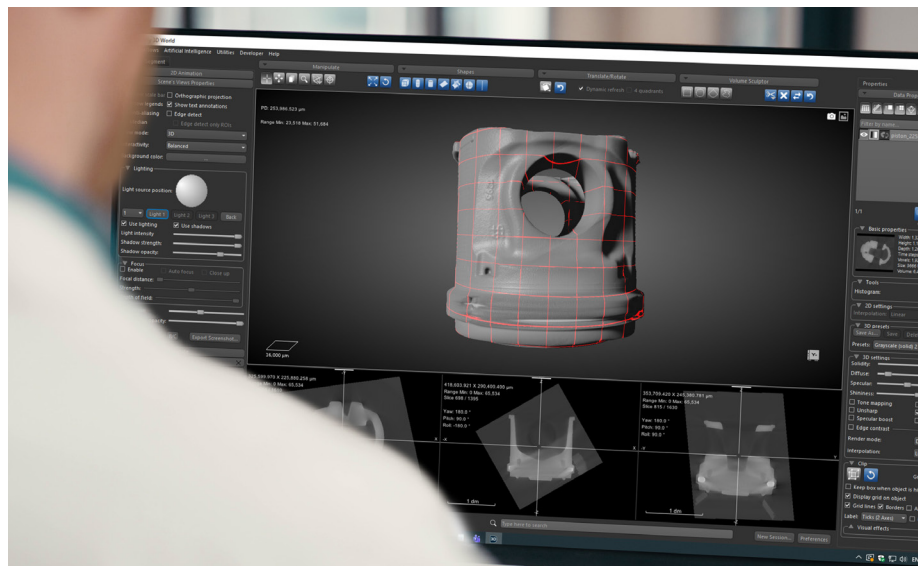
- Prepare volumetric datasets for analysis
- Segment structures using reproducible workflows
- Extract quantitative measurements
- Generate visualizations and reports

Typical Participants

- New users of Dragonfly 3D View
- Engineers and researchers beginning 3D visualization
- Application specialists performing visual inspection
- Teams requiring fast onboarding to the software

Certification

Participants who attend 100% of the scheduled training duration will receive a digital Certificate of Completion issued by the Dragonfly Academy.



3D World Deep Dive Training: Industrial Inspection (Advanced Level)

Duration: 3 days

Format: Instructor-led hands-on training

Prerequisites: Completion of 3D World Foundation Training or equivalent proficiency

This advanced course teaches participants how to build AI-driven inspection workflows in Dragonfly 3D World and apply them to real non-destructive testing and quality control scenarios.

Participants learn how to train, evaluate, and deploy deep learning models for defect detection, improve image quality using AI enhancement techniques, and generate quantitative inspection results and visual documentation suitable for reporting.

The training culminates in a guided industrial inspection project where participants analyze a component dataset from raw scan to inspection-ready results.

Software Requirements

Training is conducted in Dragonfly Cloud.

Participants need a laptop with a supported web browser and mouse with scroll wheel.

Course Content

Day 1 - AI Segmentation for Defect Detection

Participants learn how to prepare inspection data and train segmentation models for defect identification.

Topics include:

- Workflow recap and dataset preparation for inspection
- Annotation strategies for defects and inclusions
- Training deep learning segmentation models
- Model validation and accuracy evaluation
- Applying trained models to new scans

Hands-on exercises:

Train a segmentation model to detect internal defects and evaluate detection accuracy.

Day 2 – Advanced AI Enhancement & Model Optimization

Participants improve detection performance and image quality.

Topics include:

- Improving model generalization across parts
- Deep learning denoise for low-dose scans
- Super-resolution for feature clarity
- Combining AI processing steps into inspection workflows
- Troubleshooting segmentation errors

Hands-on exercises:

Enhance scan quality and improve defect detectability using AI-based preprocessing.

Day 3 - Inspection Analysis & Reporting

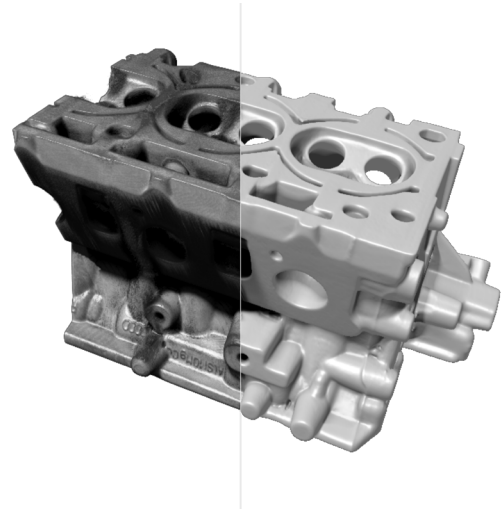
Participants apply AI workflows to a full inspection workflow.

Topics include:

- Void and inclusion analysis
- Wall thickness and deviation analysis
- Failure and defect characterization
- Quantitative measurements and statistics
- Creating inspection visualizations and reports

Hands-on exercises:

Analyze a component dataset, detect and quantify defects, and produce report-ready visual outputs.



Skills Gained

After completing this course participants will be able to:

- Train deep learning models for defect detection
- Improve scan quality using AI denoise and super-resolution
- Perform inspection analysis
- Quantify defects and deviations
- Produce reproducible inspection workflows and reports

Typical Participants

- Industrial CT analysts
- Quality and NDT engineers
- Manufacturing and failure analysis specialists
- R&D engineers working with inspection imaging

Certification

Participants who attend 100% of the scheduled training duration will receive a digital Certificate of Completion issued by the Dragonfly Academy.

3D World Deep Dive Training: Material & Geo Science (Advanced Level)

Duration: 3 days

Format: Instructor-led hands-on training

Prerequisites: Completion of 3D World Foundation Training or equivalent proficiency

This advanced course teaches participants how to build AI-driven quantitative analysis workflows in Dragonfly 3D World for materials characterization and geological imaging.

Participants learn how to train and evaluate deep learning models, enhance image quality using AI-based reconstruction methods, and extract reproducible measurements from complex microstructures. The training concludes with a guided analysis project representative of real materials or geological datasets.

Software Requirements

Training is conducted in Dragonfly Cloud.

Participants need a laptop with a supported web browser and mouse with scroll wheel.

Course Content

Day 1 - AI Segmentation of Microstructures

Participants prepare volumetric datasets and train models to identify material phases and structures.

Topics include:

- Dataset preparation and preprocessing strategies
- Annotation of phases and structures
- Training deep learning segmentation models
- Model validation and accuracy assessment
- Applying models to additional samples

Hands-on exercises:

Train a model to segment multiple material phases and evaluate segmentation quality.

Day 2 – Image Enhancement & Model Robustness

Participants improve image interpretability and workflow reliability.

Topics include:

- Handling noise and low-contrast datasets
- Deep learning denoise
- Super-resolution for feature visibility
- Improving model generalization across samples
- Reproducible workflow setup

Hands-on exercises:

Enhance dataset quality and improve segmentation performance using AI preprocessing.

Day 3 - Quantitative Material & Geological Analysis

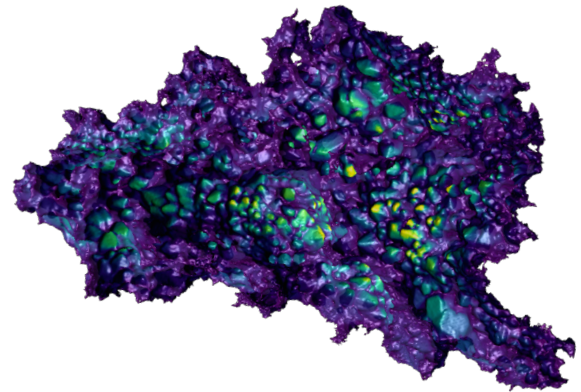
Participants perform measurements and interpret structural properties.

Topics include:

- Porosity analysis and pore network characterization
- Particle and powder analysis
- Composite and fiber structure analysis
- Ceramics and foam characterization
- Digital rock and plug analysis
- Statistical measurements and visualization

Hands-on exercises:

Analyze a representative dataset and generate quantitative measurements and visualization outputs suitable for research or



Skills Gained

After completing this course participants will be able to:

- Segment complex material phases using deep learning
- Improve data quality with AI enhancement methods
- Extract quantitative microstructural measurements
- Analyze pore networks and particle distributions
- Build reproducible analysis workflows for research or industrial characterization

Typical Participants

- Materials scientists and researchers
- Geoscientists and petrophysicists
- Additive manufacturing researchers
- Laboratory CT analysts

Certification

Participants who attend 100% of the scheduled training duration will receive a digital Certificate of Completion issued by the Dragonfly Academy.

3D World Deep Dive Training: Life Science (Advanced Level)

Duration: 3 days

Format: Instructor-led hands-on training

Prerequisites: Completion of 3D World Foundation Training or equivalent proficiency

This advanced course teaches participants how to build AI-driven workflows in Dragonfly 3D World for biological and anatomical imaging.

Participants learn how to train deep learning models to segment complex biological structures, enhance image quality using AI-based denoise and super-resolution methods, and extract quantitative morphological measurements. The training concludes with a guided analysis project representative of real biological datasets.

Software Requirements

Training is conducted in Dragonfly Cloud.

Participants need a laptop with a supported web browser and mouse with scroll wheel.

Course Content

Day 1 - AI Segmentation of Biological Structures

Participants prepare datasets and train models to identify anatomical features.

Topics include:

- Dataset preparation and annotation strategies for biological structures
- Training deep learning segmentation models
- Model validation and refinement
- Applying models to new specimens
- Managing multi-structure segmentation

Hands-on exercises:

Train a model to segment multiple material phases and evaluate segmentation quality.

Day 2 — Image Enhancement & Workflow Reliability

Participants improve visibility and consistency of biological imaging data.

Topics include:

- Handling low contrast biological datasets
- Deep learning denoise
- Super-resolution for structural clarity
- Model robustness across samples
- Reproducible workflow preparation

Hands-on exercises:

Improve segmentation quality using AI-based preprocessing and workflow refinement.

Day 3 - Morphological Analysis & Visualization

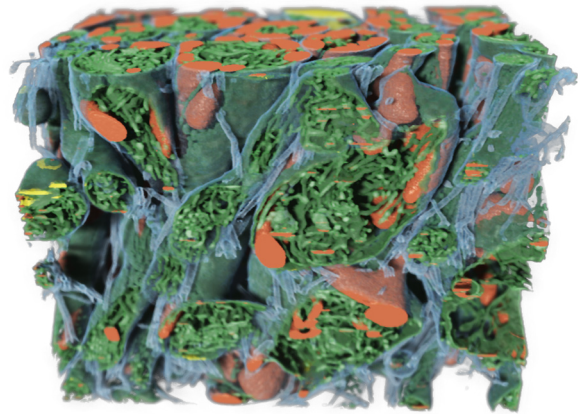
Participants perform biological measurements and prepare visual outputs.

Topics include:

- Bone anatomy segmentation and analysis
- Cortical and trabecular structure measurements
- Bone mineral density analysis
- Cellular and sub-cellular structure analysis
- Plant and animal anatomy visualization
- Paleontological structure reconstruction
- Quantitative measurements and reporting

Hands-on exercises:

Analyze a biological dataset and produce quantitative measurements and publication-quality visualizations.



Skills Gained

After completing this course participants will be able to:

- Segment complex biological structures using deep learning
- Improve biological image quality using AI enhancement tools
- Extract quantitative morphological measurements
- Visualize anatomical structures in 3D
- Build reproducible biological imaging workflows

Typical Participants

- Life science researchers
- Biomedical imaging scientists
- Anatomists and paleontologists
- Preclinical imaging specialists

Certification

Participants who attend 100% of the scheduled training duration will receive a digital Certificate of Completion issued by the Dragonfly Academy.

3D World Tailored — Application Training

Duration: 3 hours

Format: Instructor-led hands-on training

Prerequisites: None (content adapted to participant experience level)

This focused session teaches participants how to use a specific Dragonfly 3D World application tool or analysis method in a guided and practical format.

The session is customized to the requested application and participant experience level. Not all topics are covered in a single session — the instructor selects and prioritizes subjects based on the defined learning objective.

Dragonfly-provided datasets are used to ensure a consistent learning experience and allow participants to focus on methodology and best practices.

Possible Session Topics

Depending on the selected application area, the session may include:

- Introduction to the selected tool or method
- Parameter selection and practical guidelines
- Step-by-step application workflow
- Result validation and interpretation
- Common pitfalls and troubleshooting
- Best-practice usage recommendations

Hands-on exercises:

Participants apply the selected method to a prepared dataset and repeat the workflow

Skills Gained

After completing this session participants will be able to:

- Understand the purpose and limitations of the selected Dragonfly tool
- Apply the method using appropriate parameters
- Interpret outputs and validate results
- Integrate the method into their own workflow

Typical Participants

- Life science researchers
- Biomedical imaging scientists
- Anatomists and paleontologists
- Preclinical imaging specialists

Certification

Participants who attend 100% of the scheduled training duration will receive a digital Certificate of Completion issued by the Dragonfly Academy.

3D World Tailored — Workflow Development

Duration: 3 hours

Format: Instructor-led hands-on training

Prerequisites: None (content adapted to participant experience level)

This session helps participants design, refine, or standardize an analysis workflow in Dragonfly 3D World using their own datasets.

The session is customized to the customer's objectives.

Not all topics are covered in a single session — the instructor selects and prioritizes activities based on the workflow goals and dataset characteristics.

Customer datasets are used to ensure direct applicability of the results.

Possible Session Topics

Depending on the defined objective, the session may include:

- Defining analysis goals and outputs
- Data preparation and preprocessing strategy
- Selection of segmentation methods
- Quantitative measurement workflow design
- Visualization and reporting preparation
- Improving reproducibility and robustness
- Optimization and troubleshooting

Hands-on exercises:

Participants build or refine a workflow directly on their own dataset under instructor guidance.

Skills Gained

After completing this session participants will be able to:

- Structure a complete analysis workflow
- Select appropriate tools for each processing stage
- Improve robustness and reproducibility
- Apply the workflow to similar datasets

Typical Participants

- Teams standardizing internal analysis procedures
- Researchers optimizing project workflows
- Users transitioning from exploratory work to routine analysis

Certification

Participants who attend 100% of the scheduled training duration will receive a digital Certificate of Completion issued by the Dragonfly Academy.

3D World Tailored — Developer Training

Duration: 3 hours

Format: Instructor-led hands-on training

Prerequisites: None (content adapted to participant experience level)

This session introduces automation and developer-oriented capabilities in Dragonfly 3D World and helps participants implement solutions relevant to their own workflows.

The training is customized to the customer's objectives.

Not all topics are covered in a single session — the instructor selects and prioritizes subjects based on the requested use case and technical level.

Depending on the training goal, either customer datasets (for realistic automation scenarios) or Dragonfly datasets (for demonstration and learning) are used.

Possible Session Topics

Depending on the defined objective, the session may include:

- Automation concepts in Dragonfly
- Structuring repeatable processing pipelines
- Scripting fundamentals and logic structure
- Batch processing strategies
- Parameterized workflows
- Debugging automated processes
- Integration concepts and best practices

Hands-on exercises:

Participants implement a small automated workflow aligned with the defined objective.

Skills Gained

After completing this session participants will be able to:

- Understand available automation approaches in Dragonfly
- Design repeatable processing workflows
- Reduce manual interaction in routine tasks
- Apply automation concepts to their own datasets

Typical Participants

- Advanced users and technical specialists
- Data scientists and image analysis engineers
- Teams implementing routine or high-volume analysis workflows

Certification

Participants who attend 100% of the scheduled training duration will receive a digital Certificate of Completion issued by the Dragonfly Academy.