



Technical Specifications

<https://sprayverse.com>

Trusted by
120+ Organizations
Worldwide



Introduction

Traditional training methods face major challenges: high consumable costs, health risks, limited repetition, environmental compliance requirements, and inconsistent instructor evaluation. SprayVerse addresses all of these issues through immersive simulation.

SprayVerse simulates professional spray-painting behavior including gun distance, angle, speed, overlap, trigger control, and material flow.

Two primary technologies are supported:

- HVLP- Automotive and Aircraft
- Airless / Air assisted Airless - Construction, Furniture and Residential

The Package

SprayVerse is delivered within a premium Italian-manufactured compact hard case, engineered with custom precision-cut foam inserts, shock-resistant, dust-resistant, and waterproof protection standards to ensure secure storage, mobility, and operational durability.

The SprayVerse hardware package includes the latest-generation Meta Oculus Quest VR headset, integrated with a professionally developed real spray gun designed to replicate authentic ergonomic handling and maximize procedural training immersion. The system additionally incorporates a dedicated high-bandwidth link cable enabling external display casting.

The platform further integrates a cloud-based analytics infrastructure for centralized session tracking, performance monitoring. Branding support is also included, allowing seamless integration of client-specific logos, visual identity assets, graphical interfaces.



Multiple Industries

SprayVerse incorporates five primary industrial training sectors: Automotive, Aerospace, Construction, Furniture, and a Residential Training Module. Each operational category contains a diverse range of industry-specific components and application surfaces designed to support advanced procedural training, skill development, and practical simulation exercises.

Interactive Learning Lessons

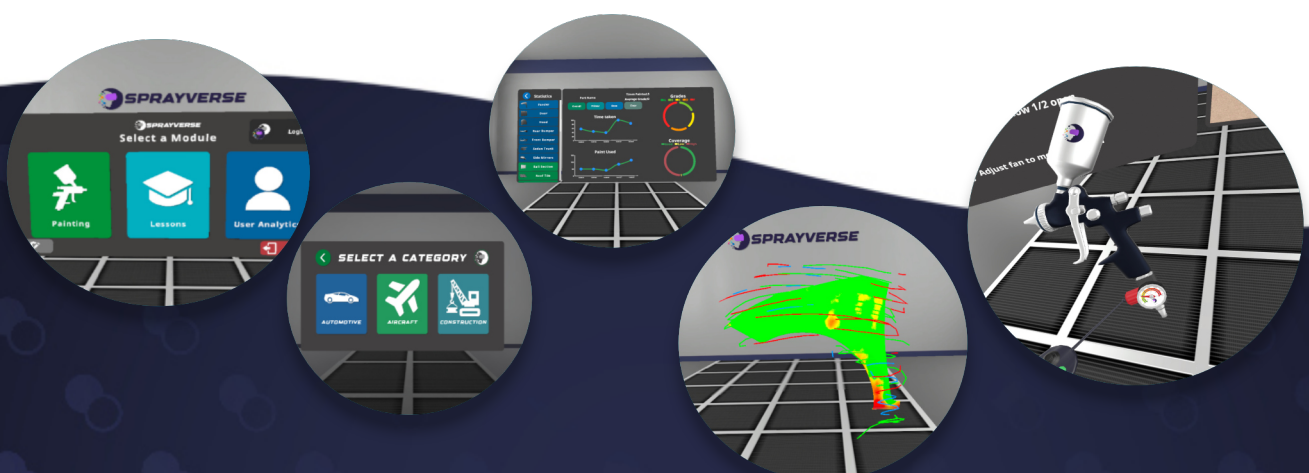
SprayVerse includes integrated interactive learning modules designed to teach the core principles of professional spray painting within an immersive VR environment. Training content covers spray application techniques, spray gun setup and operation, coating workflows, as well as paint mixing and paint blending procedures aligned with real-world industry practices.

Coverage Heatmaps and Tracking

SprayVerse delivers real-time performance feedback through integrated heatmaps, and dynamic visual guidance systems. Active heatmap visualization displays coating coverage across each application layer, accurately identifying over-applied and under-applied regions, while real-time visual cues ensure consistent spray distance and proper application technique throughout the training process.

Built-in Grading and Analytics

SprayVerse incorporates an advanced real-time grading and performance evaluation system designed to analyze user proficiency throughout each training session. Key performance metrics, including coating coverage accuracy, paint consumption efficiency, and task completion time, are continuously monitored and assessed. The platform additionally records full spray gun movement data, enabling comprehensive post-session analysis, performance review, and procedural optimization.



Main Modules

SprayVerse offers three modules to enhance the learning experience:

- Painting
- Lessons
- User Analytics

In the Training module, users can select one of five painting categories

- Automotive,
- Aircraft,
- Construction,
- Furniture,
- Residential Training

to practice on their chosen parts using the appropriate painting techniques, such as HVLP or Air Assisted Airless/Airless painting.

The Lessons module offers in-depth instruction on spray painting fundamentals, including:

- Spray Gun Setup
- Painting Tutorial
- Paint Mixing and
- Paint Blending Tutorial

The User Analytics module enables users to review and analyse recorded spray painting sessions, facilitating detailed performance evaluation and skill improvement.



Parts & Categories

Automotive



Aircraft



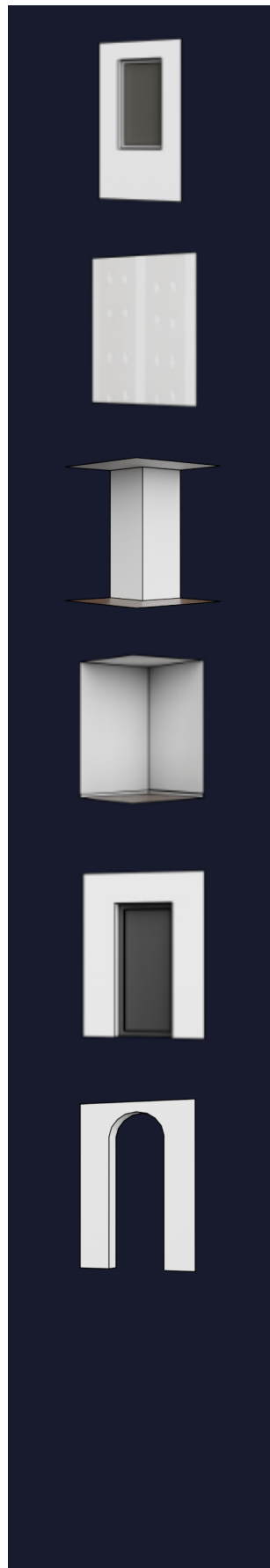
Construction

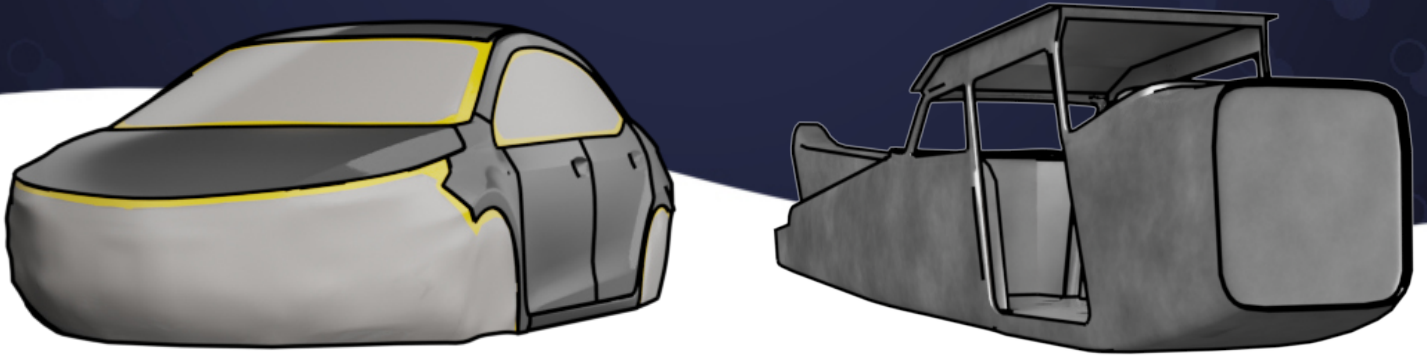


Furniture



Residential





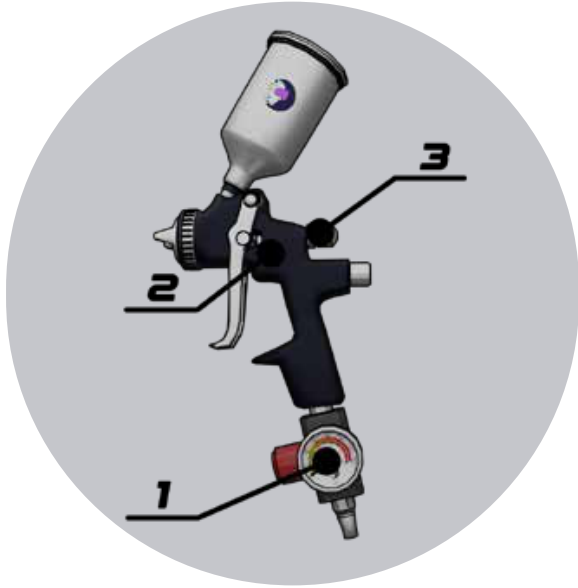
Full Car and Small Aircraft

SprayVerse additionally includes full-scale vehicle and aircraft training assets, consisting of a complete automobile model and a compact aircraft model integrated within the simulation environment.

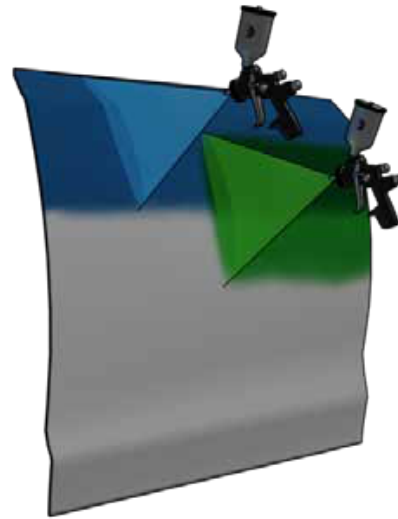
The expanded assets are intended to support automotive and aviation-specific coating workflows, enabling training across curved panels, edges, multi-surface assemblies, and large-area components. This allows users to practice spray consistency, overlap accuracy, coating uniformity, and movement control under conditions representative of real industrial applications.

The inclusion of these large-format training environments extends the platform's capabilities beyond standard component-based exercises, supporting advanced procedural training and more technically demanding application scenarios.

Available Lessons



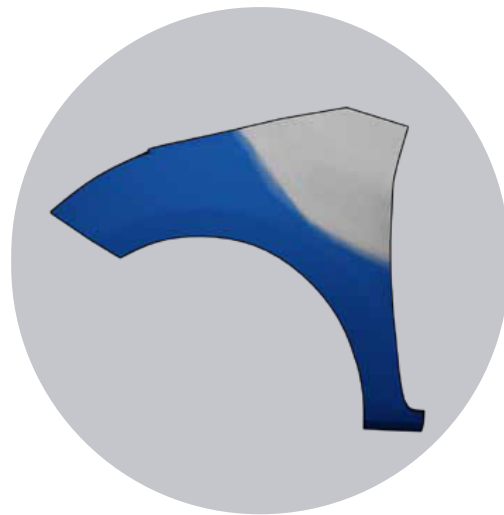
Spray Gun Settings explains the function of each knob on the spray gun.



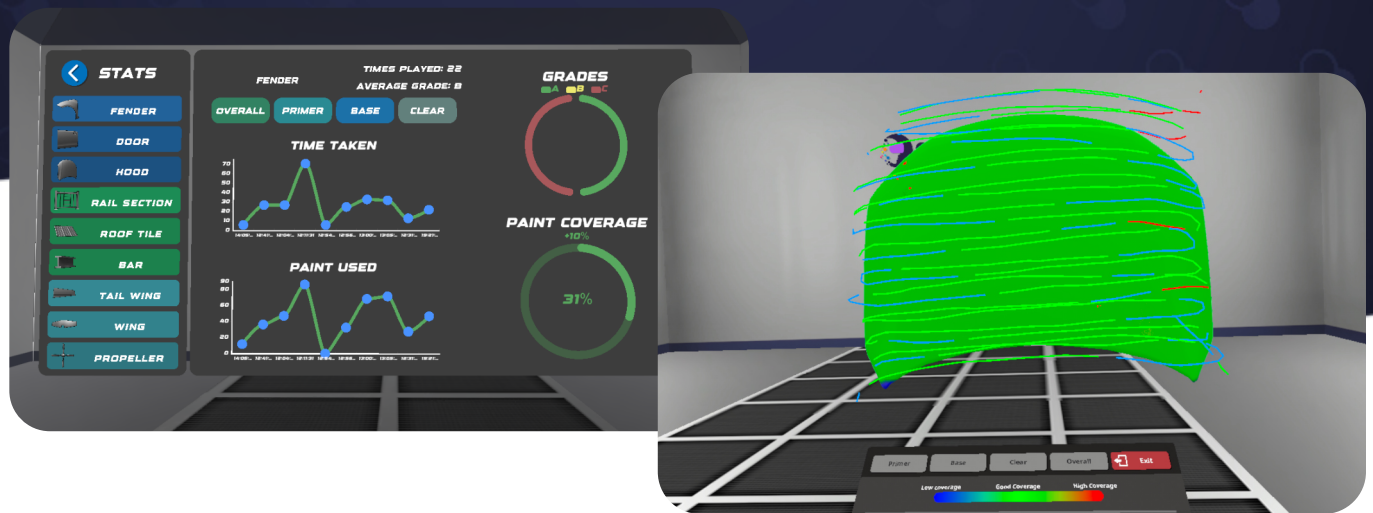
Painting Tutorial guides you through proper spray painting techniques.



Paint Mixing teaches you to read cup measurements and pour the correct amount of paint.



Paint Blending shows how to seamlessly blend repaired areas with existing paint.



Grading and Analytics

SprayVerse features an advanced real-time grading and performance evaluation system designed to assess user proficiency across key training metrics, including coating coverage accuracy, paint consumption efficiency, and overall task completion time. To further enhance the learning process, the platform continuously tracks and records spray gun movement data throughout each session, generating valuable performance insights for detailed post-session analysis and technical improvement.

The system delivers immediate feedback through interactive heatmap visualization technology, dynamically displaying coating distribution across each applied layer while accurately identifying over-painted and under-painted regions. Integrated visual guidance mechanisms additionally assist users in maintaining optimal spray distance and application consistency during operation.

For deeper performance assessment, recorded spray gun trajectories are rendered as motion tracking paths, enabling comprehensive review of user technique, movement precision, spray patterns, and overall procedural efficiency to support continuous skill refinement and professional-level training development.

Session Browser

The Session Browser provides users with a centralized and structured archive of all previously completed SprayVerse training sessions, enabling efficient access to historical performance data and recorded simulation activities. Each session entry can be individually selected and loaded, initiating a full replay of the training sequence with complete visual and performance tracking data.

This replay functionality allows users to review their session, closely analyze spray application techniques, and identify deviations in coating consistency, movement precision, and procedural accuracy. By revisiting past sessions, users can systematically detect mistakes, evaluate decision-making patterns, and understand the impact of their actions on overall coating quality and efficiency.

The system is designed to support iterative learning and continuous improvement, giving users the ability to compare sessions over time, track progression, and refine their technique through detailed post-session analysis and performance reflection.



The screenshot displays a mobile application interface titled "Select a session to review". It features a table with five columns: Date, Part Name, Grades, Paint Used, and Time Taken. The table lists six training sessions, each with a unique date and time, part name, grade, paint usage, and duration. A green back arrow icon is visible in the top left corner of the table area.

Select a session to review				
Date	Part Name	Grades	Paint Used	Time Taken
2025-01-21 10:25:58	Fender	F	70.74	00:45
2025-01-20 16:16:41	Fender	D	68.41	00:43
2025-01-20 16:14:36	Hood	D	47.70	01:34
2025-01-20 16:12:09	Door	A	67.55	01:56
2025-01-20 16:10:30	Fender	D	61.01	01:24
2025-01-16 14:46:07	Fender	D	112.13	01:22



Spray Gun Adjustments

The Settings Panel provides users with comprehensive control over spray gun configuration, allowing precise adjustment of key operational parameters before or during an active spraying session. Users can fine-tune variables such as airflow, fan width, and material flow rate to achieve the desired spray pattern and optimize application performance for specific training scenarios.

For airless painting workflows, the Tip Selection module enables users to select from a range of spray tips while also adjusting pressure settings to match the technical requirements of the task at hand. Additional advanced controls include air cap rotation for directional spray adjustments, offering enhanced precision and adaptability across different surface geometries and application conditions.

The interface also includes a real-time heatmap visualization toggle, providing immediate feedback on spray coverage distribution to support accuracy and consistency during application. Every parameter adjustment can be instantly tested using the integrated Test Sheet adjacent to the settings panel, enabling users to iteratively refine their configuration and ensure optimal setup precision prior to commencing their training.

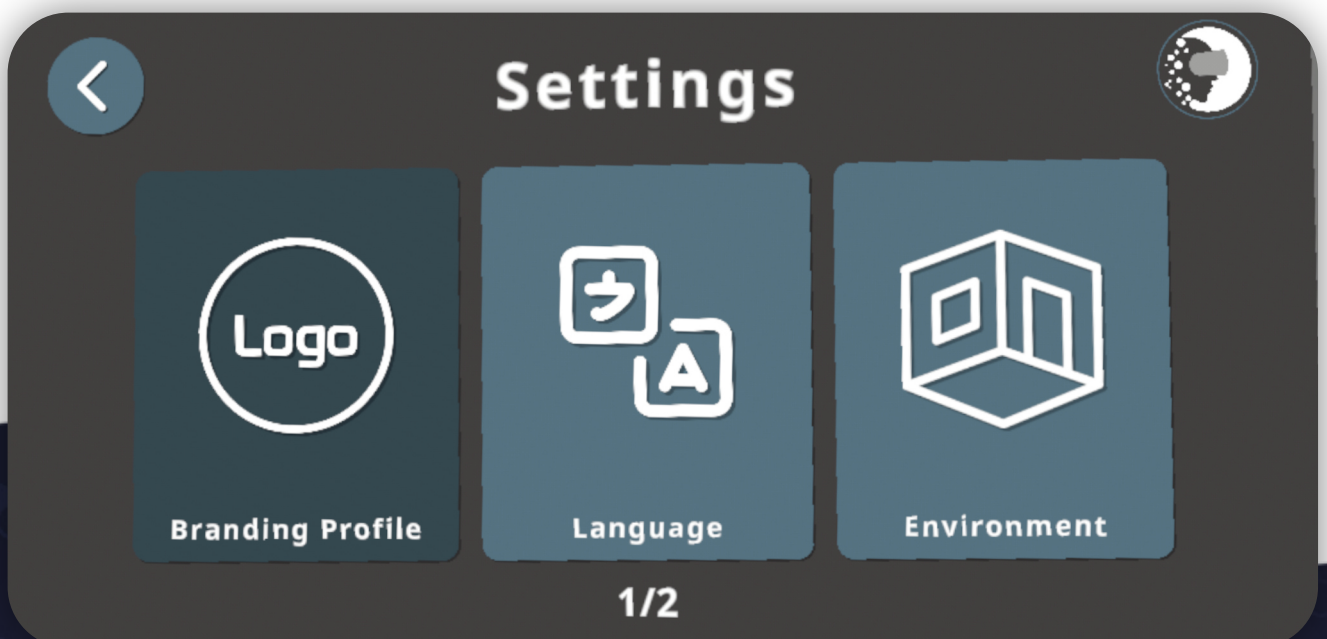
Settings

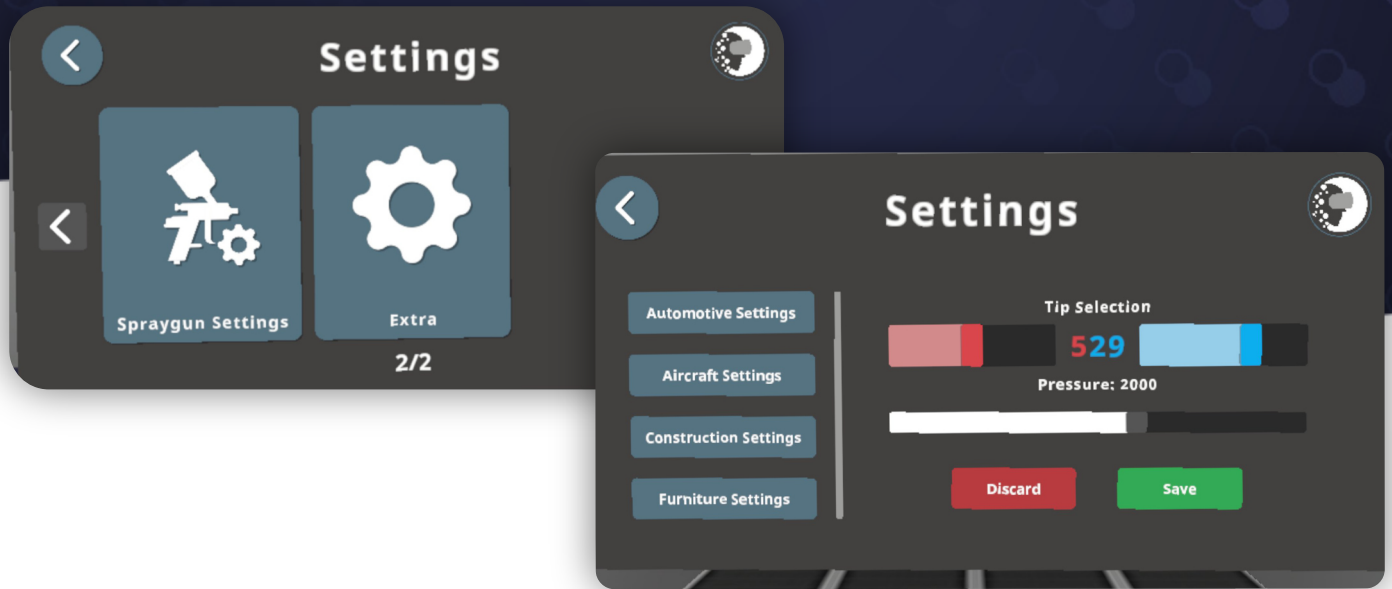
The SprayVerse Settings Panel provides a suite of customization options designed to tailor the training environment to user and organizational requirements. It is structured into three core modules: Branding, Language, and Environment.

The Branding section enables users to apply and switch between saved branding profiles, allowing branding of the virtual training environment. This functionality is particularly suited for companies, training institutions, and enterprise clients seeking to integrate corporate identity elements and maintain a consistent visual presence throughout the simulation experience.

The Language section offers multi-language support, including English, Korean, Spanish, Polish, Turkish, Greek, and French, ensuring broad accessibility and a seamless user experience for trainees across diverse regions and linguistic backgrounds.

The Environment section allows users to choose the virtual training space, between Hangar or Booth.

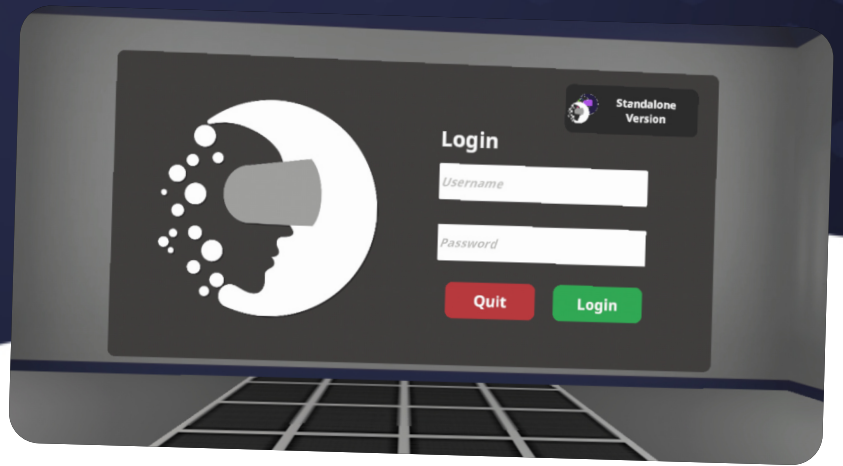




Spraygun Settings and Extras

The Spraygun Settings tab allows users to configure spray gun parameters individually for each training module. Settings are stored separately per module, enabling different spray gun configurations across training scenarios.

The Extras tab contains a toggle option for a simplified grading mode. When enabled, performance results are limited to three grade levels (A, B, and C) instead of the standard grading system. This mode is intended for demonstrations, exhibitions, and public showcase events where the focus is on user engagement and experience rather than detailed performance assessment.

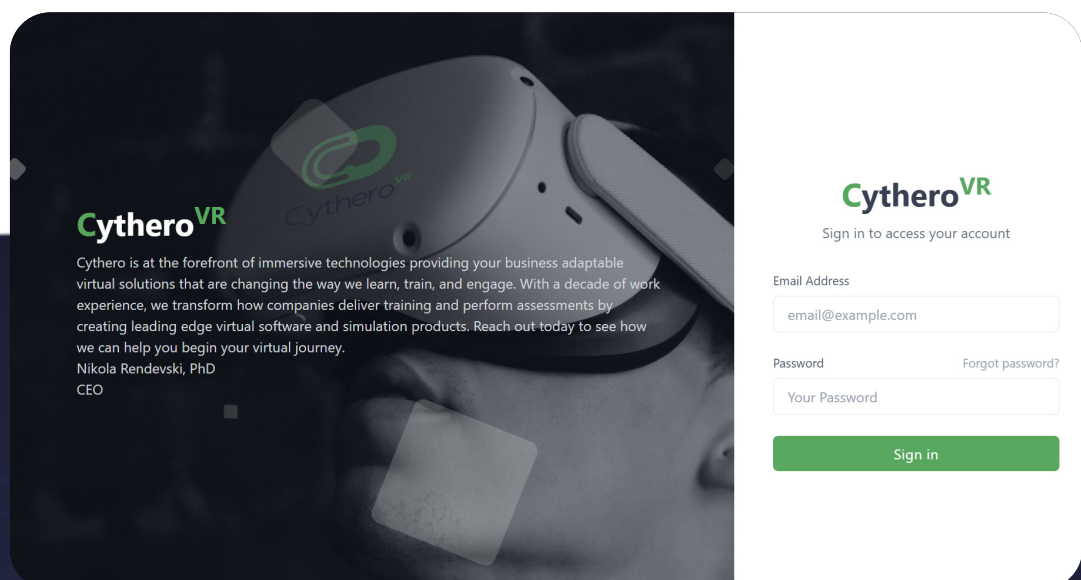


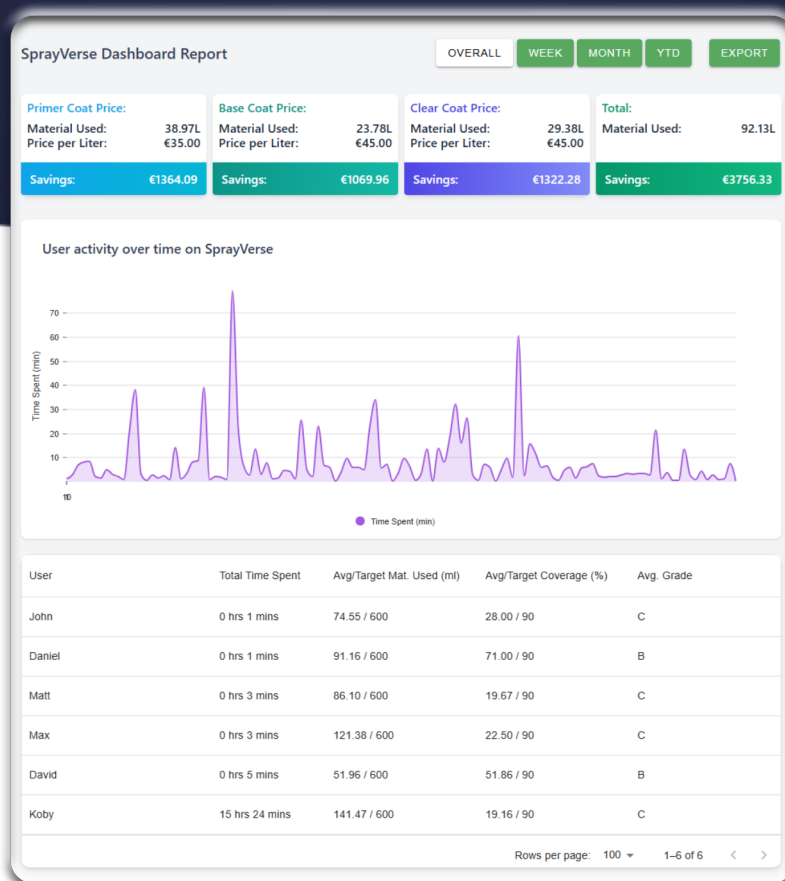
Enterprise Mode and Cloud Analytics

The Enterprise Version enables secure multi-user access, allowing organizations to create and manage multiple accounts while tracking individual user progress and performance.

It also includes a web-based administration panel for managing users, organization settings.

The web-based administration panel provides control for managing users, configuring organizational settings, tracking trainee progress, and generating detailed performance and usage reports.





Each SprayVerse All-in-One package includes a complimentary 5-year subscription to the cloud-based web portal, providing access to an advanced suite of analytics and reporting tools. The platform delivers in-depth insights into material consumption, cost efficiency, and performance metrics across all training sessions.

Core functionality includes Material Cost Analysis, which breaks down usage and pricing for primer, base coat, and clear coat materials while highlighting overall cost savings. Users can monitor total material load, evaluate cost efficiency, and track cumulative savings over time.

The Dashboard also features a User Activity Chart, offering visualized performance trends and spray gun usage patterns to support continuous improvement. In addition, a Performance Metrics Table consolidates key data points such as total training time, material waste, spray consistency, and average scoring results.

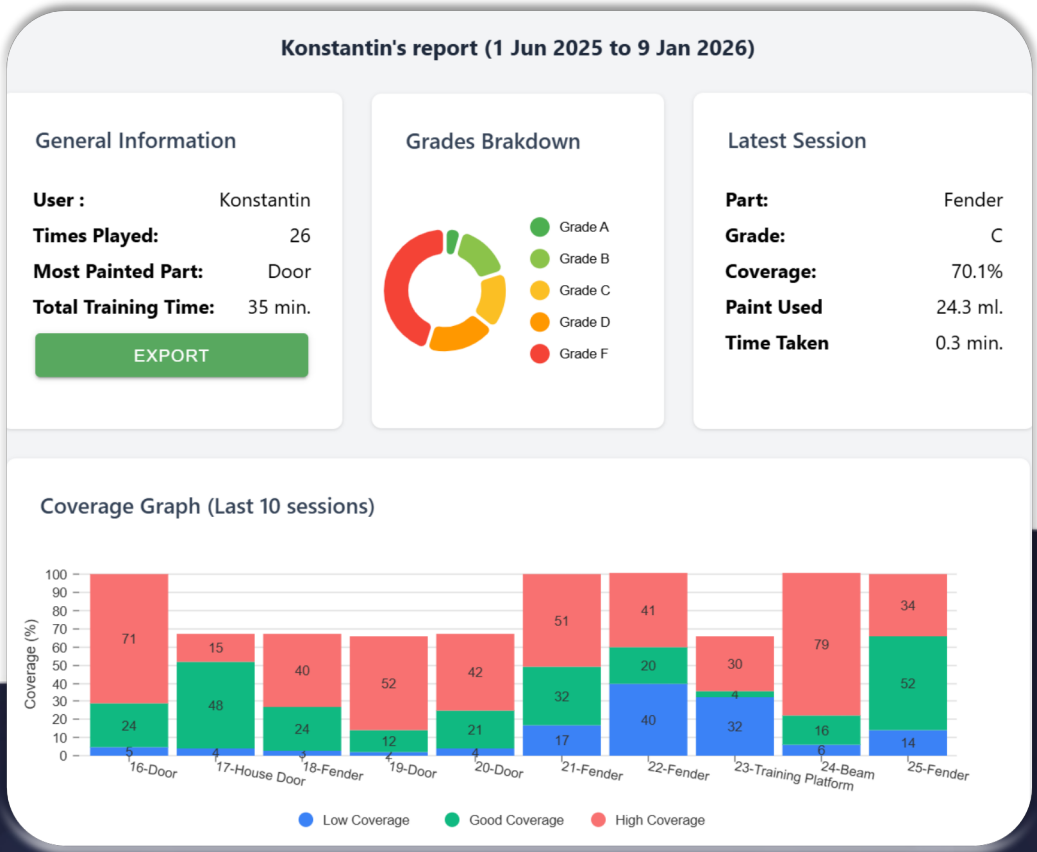
With flexible time-based filtering options including Weekly, Monthly, Yearly, and Custom ranges, users can generate tailored reports to meet specific analytical needs.

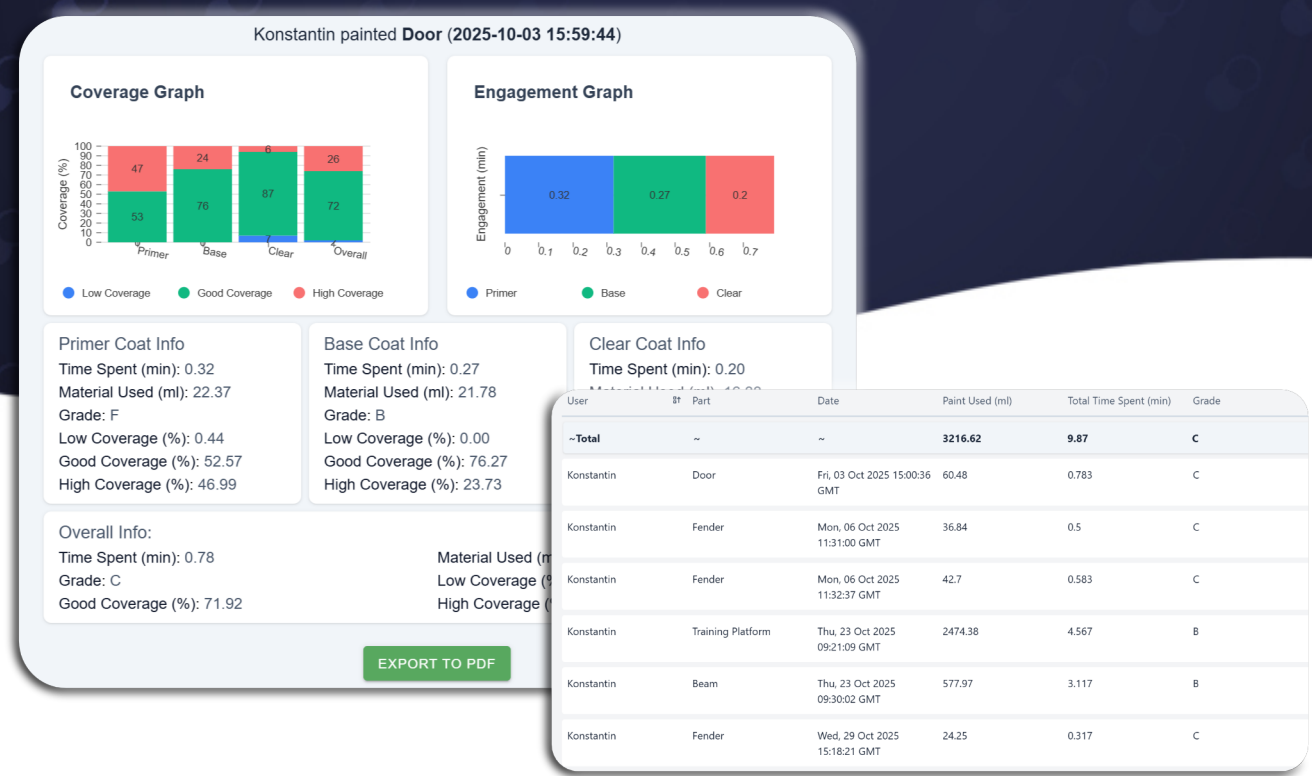
Trainee Performance Report

The Trainee Performance Report provides a consolidated overview of user progress over a selected time period, delivering actionable insights into performance, activity levels, and skill development trends. It aggregates key training data into a structured summary to support both individual evaluation and long-term improvement tracking.

The report includes a general information overview, a detailed breakdown of performance grades, and a summary of the most recent training session. It also features a coverage graph that visualizes performance trends across multiple sessions, enabling clear identification of consistency, progression, and variability over time.

Designed as both a visual and analytical assessment tool, the report supports the evaluation of user engagement, technical proficiency, and key areas for targeted improvement within the SprayVerse training system.





Training Sessions

The Training Session Report provides a comprehensive record of all completed user sessions, offering both high-level summaries and in-depth analytical insights for each individual training activity.

The session overview presents key data points including the trained part, session date, total paint consumption, total time spent, and achieved grade, delivering a clear and structured snapshot of overall performance across all sessions.

Each entry can be expanded to reveal detailed analytics such as Coverage Graphs and Engagement Graphs, which assess both the quality of paint application and the level of user interaction throughout the training process. Additional session-specific metrics include primer coat data, time allocation per layer, material usage breakdowns, and coverage percentages.

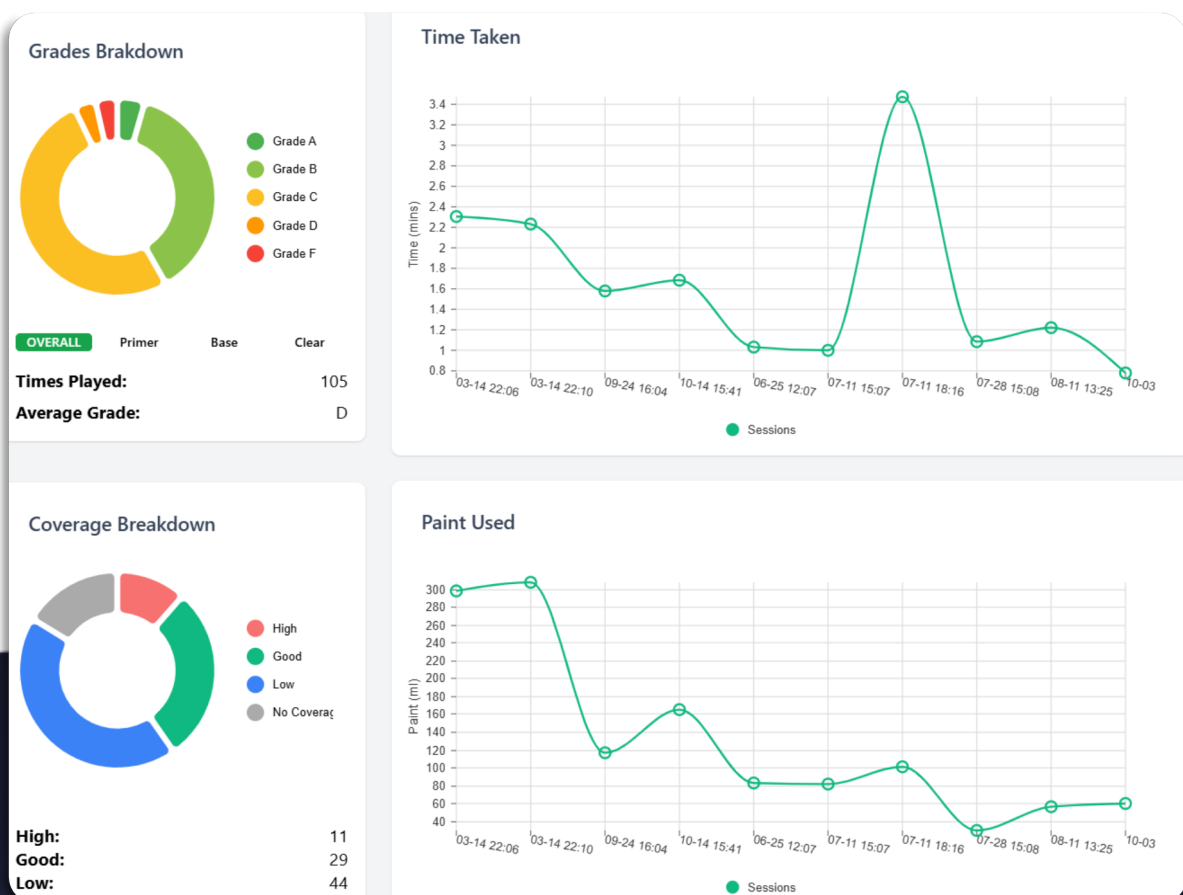
An overall performance assessment consolidates these metrics into a unified summary of time efficiency, grading outcomes, and application quality. This level of detailed breakdown enables users to systematically track progress, identify behavioral and technical patterns, and continuously refine their spray techniques for improved performance outcomes.

Part Report

The Part Report in SprayVerse delivers a comprehensive performance analysis for a selected training component, combining visual analytics with key statistical insights to provide a clear and concise overview of user proficiency.

It includes a grade breakdown chart to evaluate performance across sessions, a coverage analysis to assess paint application quality, and trend-based line graphs illustrating time consumption and paint usage over repeated training attempts. These visualizations are complemented by aggregated data summaries, such as average grading scores and overall resource utilization.

Together, these insights enable users to effectively monitor progression, identify performance patterns, and refine their spray techniques to achieve greater precision, consistency, and operational efficiency.





SPRAYVERSE

SPRAY PAINTING SIMULATOR

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Cythero^{VR}