INTERNSHIP TRAINING REPORT

PREPARED BY

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01FE22BME442

Under the Guidance of: Dr. Vinayak Kulkarni

At

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This report is submitted to

Department of Mechanical Engineering

K L E Technological University, Hubballi

2024-25

Department of Mechanical Engineering

CERTIFICATE

Certified that the Internship work carried out by Mr./Ms **Mahantesh. R. Aralikatti** USN **01FE22BME442**, a bonafide student of **KLE Technological University, Hubballi** in partial fulfillment for the award of Bachelor of Engineering /Bachelor of Technology in **Mechanical Engineering** of the K L E Technological University, Hubballi during the year **2024-2025**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The Internship report has been approved as it satisfies the academic requirements in the said Degree.

Dr. Vinayak Kulkarni	**G. U. Raju**	**Dr. Basavaraj Anami**
(University Guide)	**(Head of the Department)**	**(Registrar)**

External Viva
Name of the examiners Signature with date
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2.

Dassault Systèmes
DS Global Services Private Ltd | Plot No. 15/A, Rajiv Gandhi InfoTech Park Phase 1, Industrial Area, Hinjewadi | 411057 Pune, India

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Akaneswar SAIKIA
Senior Manager
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Sunil KULKARNI
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Hub Leader DSGS

DASSAULT SYSTEMES

16-May-25

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mahantesh Aralikatti**, Employee No. **00077863** is associated with us as an intern since **06-Jan-25**. His designation is **Intern - Industry Solution Technical**.

The final internship completion letter will be issued upon successful completion of the internship and respective formalities.

This letter has been issued on Mahantesh's request.

The Company will not be responsible for any liability whatsoever.

For Dassault Systemes Global Services Private Limited,

Pankaj Deshpande
India People Value Services Manager

Dassault Systemes Global Services Pvt. Ltd.

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CHAPTER 1
INTRODUCTION

The industrial training has tried to highlight the need of Training & Development program which helps organization to build on their success and also to employees' overall progress to shape their future and get a brief knowledge how the activities go on in the organization.

1.1 Industrial Training Objectives

The primary objectives of my industrial training at Dassault Systèmes Global Services were as follows:

- **Gain Exposure to Real-World Industry Practices**
  To observe and understand how large-scale software and engineering solutions are developed, deployed, and maintained in a professional setting.
- **Apply Academic Learning to Live Projects**
  To implement theoretical concepts from engineering courses into practical applications using tools such as CATIA, ENOVIA, and other modules from the 3DEXPERIENCE platform.
- **Acquire Technical Proficiency**
  To develop hands-on experience in 3D modeling, simulation, and PLM systems, which are widely used across global industries.
- **Understand the PLM Ecosystem**
  To gain insights into how product lifecycle management is integrated across various stages of design, development, and manufacturing.
- **Develop Professional and Soft Skills**
  To build communication, project collaboration, and time management skills through working in team-based and mentor-guided environments.

1.2 Importance to Industrial Training

Interning at Dassault Systèmes provided a rich and valuable experience beyond just technical learning. Some key takeaways and the importance of this industrial training include:

- **Industry-Relevant Skill Development**
  Working with Dassault Systèmes' advanced software tools and platforms enabled me to gain skills that are highly sought-after in engineering and design fields.
- **Comprehensive Understanding of PLM**
  The training allowed me to explore end-to-end digital product lifecycle processes and understand how companies manage data, workflows, and innovation through a centralized platform.
- **Contribution to Live Projects**
  Being involved in actual client-based assignments gave me a sense of responsibility, accountability, and motivation to produce high-quality work.
- **Exposure to Industry 4.0 Trends**
  I gained exposure to smart manufacturing concepts, digital twins, and the role of AI/ML in modern engineering—pushing me to think beyond traditional design methods.
- **Career Readiness**
  The professional work environment, mentorship, and project experience helped prepare me for future career roles in design, engineering, and software domains.

Fig No 1.1 Company Logo

Fig 1.2 3DEXPERIENCE Compass Logo

CHAPTER 2

COMPANY BACKGROUND & ORGANIZATION STRUCTURE

2.1 Organization History and Background

Dassault Systemes is the story of a company that has gone from startup to worldwide leader in invention of new things, spanning all countries and all businesses! We have set ourselves and (accomplished or gained with effort) some amazing challenges regarded by everyone else in the market to be impossible, among them 3D Design, the Digital Mock-Up (DMU), Product Lifecycle Management (PLM), and today 3DEXPERIENCE.

Dassault Systèmes Global Services (DSGS) is the professional services and consulting arm of Dassault Systèmes SE, a global leader in 3D design software, 3D digital mock-up, and Product Lifecycle Management (PLM) solutions. Headquartered in Vélizy-Villacoublay, France, Dassault Systèmes has a global presence with operations in over 140 countries and serves clients across multiple industries including aerospace, automotive, life sciences, industrial equipment, energy, construction, and more.

DSGS plays a critical role in delivering customized implementation, integration, and support services for the 3DEXPERIENCE platform, which is Dassault Systèmes' flagship innovation platform. This platform combines 3D modeling, simulation, data intelligence, and social collaboration in a unified digital environment.

With deep domain expertise and a global delivery model, Dassault Systèmes Global Services works closely with clients to enable their digital transformation journey. The organization is responsible for implementing complex PLM systems, guiding businesses through the adoption of digital twins, model-based systems engineering (MBSE), smart manufacturing, and end-to-end digital thread strategies.

2.2 History

The first challenge to get us underway came along in 1981. At the time, engineers still designed aircraft on paper drawing boards – 2D computer-aided design was only in the embryonic stage. Marcel Dassault (the founder of the industrial firm that bears his name) and Charles Edelstenne (currently the Chairman of the Board of Dassault Systèmes) embarked on the dual challenge of creating their own 3D software to design aircraft and

setting up a separate company to sell the software to other industries. Dassault Systèmes was born. In 1981, Dassault Systèmes consisted of an R&D lab with about 20 people working for one sector of industry –aerospace – with just one brand, CATIA. Today, our workforce has grown to 17,000 people and we market a portfolio of 12 brands. Seven are market leaders CATIA, BIOVIA, GEOVIA, SOLIDWORKS, ENOVIA, CENTRIC PLM and DELMIA. Two are 2nd in their market 3DEXCITE, SIMULIA. Three are startup brands 3DVIA, EXALEAD, NETVIBES.

Dassault Systèmes SE is recognized as a global leader in innovation platforms, offering a wide portfolio of applications across industries. With over 20,000 employees and customers in 140+ countries, it empowers organizations to digitally transform their products, services, and operations.

2.3 Mission:

Dassault Systèmes' mission is to harmonize product, nature, and life through 3D virtual experiences. The company aims to create innovative digital solutions that enable businesses to design, simulate, and optimize products sustainably. By leveraging advanced technologies like the 3DEXPERIENCE platform, Dassault Systèmes helps industries transform their processes, improve efficiency, and drive innovation while minimizing environmental impact.

2.4 Vision

Dassault Systèmes’ vision is to enable A sustainable world through virtual universes. The company strives to empower businesses and individuals with cutting-edge 3D technology to imagine, design, and create innovative solutions that enhance quality of life. By fostering digital transformation across industries, Dassault Systèmes envisions A future where virtual simulations drive smarter decision-making, improve sustainability, and accelerate progress in science, engineering, and manufacturing

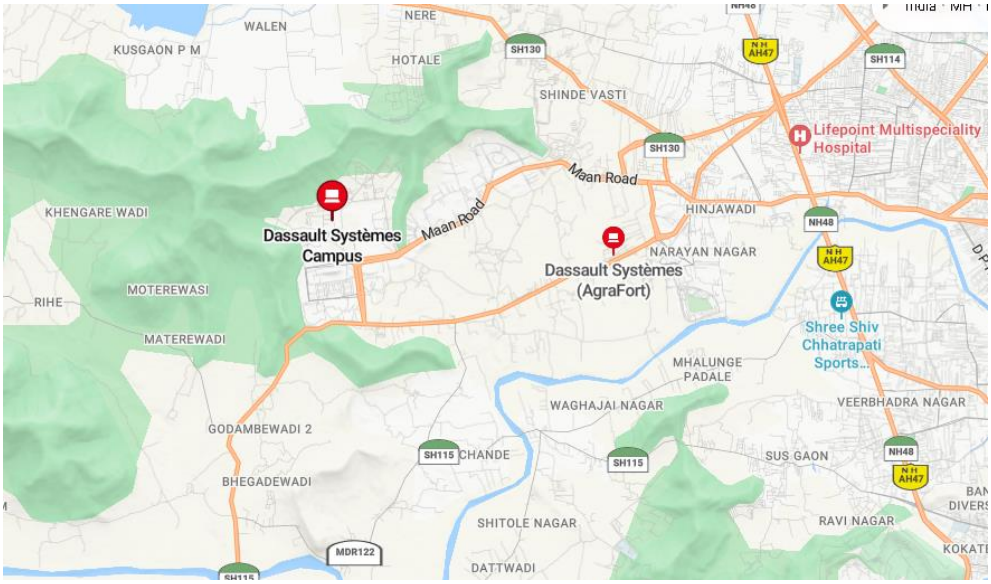


Fig. 2.1 Location of Dassault Systemes Global Services

Fig. 2.2 Dassault Systemes, Pune

2.5 Brands

Dassault Systèmes has a portfolio of well-known software brands**,** each specializing in different aspects of product design, engineering, simulation, and lifecycle management. These brands are unified under the 3DEXPERIENCE platform, enabling collaboration across disciplines.

Fig 2.3 Brands

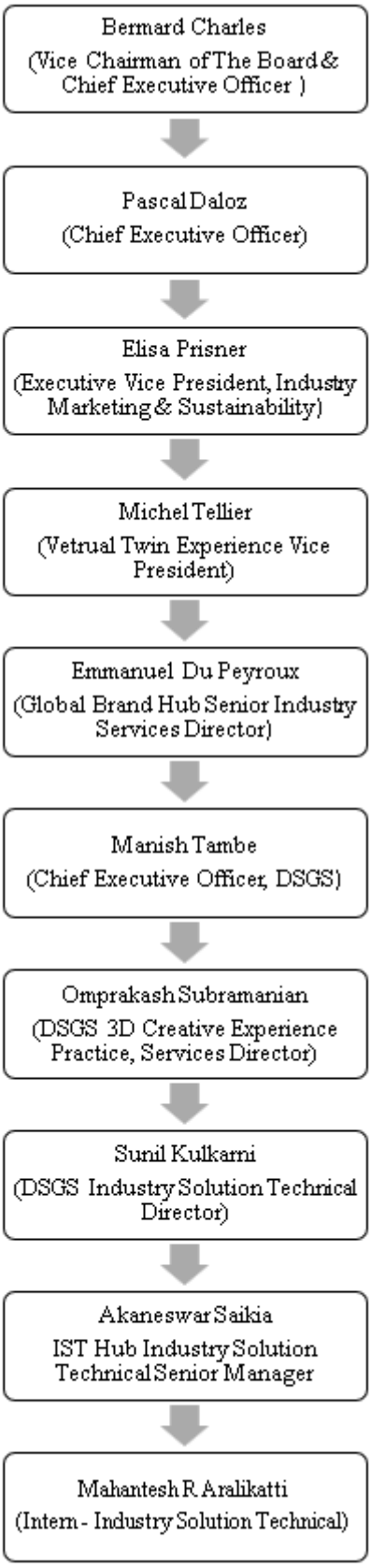
Fig 2.4 Industries

2.6 Customers

Dassault Systemes serves around 12 industries which mainly comprises of Life Sciences, Health Care, Business Services, Defense and Aerospace & etc.

Fig 2.5 Customers of Dassault Systemes

2.7 Organization Chart



CHAPTER 3

WEEKLY JOBS SUMMARY

3.1 Weekly Job Summary

These are the training activities conducted on weekly basis which were assigned from 6th January 2025 to 8th April 2025

Table 3.1 Weekly activities

Date	Activities
06/01/2025 To 07/01/2025	Onboarding Activities Organization Overview CEO Talk
08/01/2025 To 14/01/2025	3DS Profile Update Ethics And Compliance Training Business Role Certification Training 3DSwymer Certification Training Mastering the 3DExperience Platform- Level1
21/01/2025 To 14/02/2025	Catia Training (Part Design, Generative Shape Design, Generative Wireframe & surface Design, Assembly Design, Sheet Metal & Bent Part Design)
15/0/2025 To 17/02/2025	Enovia Training in Brief (Requirement Management, Project Management)
04/03/2025 To 06/03/2025	Delmia Training in Brief (Process Planning)
07/03/2025 To 13/03/2025	Simulia Training in Brief (Model Creation, Messing and Boundary Condition)
14/03/2025 To 21/03/2025	Practice CATIA Live Rendering 3DEXPERIENCE Visual Experience Designer
24/03/2025 To 31/03/2025	SolidWorks 3D Sculptor

3.2 Certifications Completed

- Ethics And Compliance
- POSH Training certificate
- Business Role Certification
- 3DSwymer Certification
- Mastering the 3DExperience Platform- Level1
- Catia Associate
  (Mechanical Designer- Hands On)
- Enovia Associate
  (Collaborative Industry Innovator)
- Delmia Associate
  (Process Engineer)
- Be A 3DSWYMER-Associate
- 3DEXPERIENCE Visual Experience Designer
- SolidWorks 3D Sculptor

CHAPTER 4

TECHNICAL CONTENTS/REPORTS

I was working as an IST Intern in DSGS-INDUSTRY SOLUTION TECHNICAL in which the brand creates the demos for the sales.

4.1 CATIA

CATIA (Computer Aided Three-dimensional Interactive Application) is a powerful CAD (Computer-Aided Design) software suite developed by Dassault Systèmes. It's widely used in various industries, especially in automotive, aerospace, and industrial design, for product design and manufacturing

CATIA offers a wide range of tools for designing, engineering, and simulating products in 3D. Some key features of CATIA include:

1. **3D Modeling**: It allows users to create detailed 3D models of products, with a focus on complex surfaces and assemblies.
2. **Product Lifecycle Management (PLM)**: CATIA is often used as part of a broader PLM system, which helps manage a product's entire lifecycle from design to production.
3. **CAD/CAE Integration**: It seamlessly integrates computer-aided engineering (CAE) for tasks like structural analysis, fluid dynamics, and thermal simulations.
4. **Collaborative Work**: Multiple users can work together on the same project simultaneously, improving teamwork and efficiency.

Number Of Workbenches Used

1. Part Design:
    - Focuses on creating 3D models of individual parts.
    - Tools: Sketching, extruding, and adding features like holes, pockets, fillets, etc.
    - Used for parametric design of basic solid parts.
2. Generative Shape Design:
    - Specialized for complex surface modeling.
    - Focuses on generating freeform shapes and curves.
    - Used in industries where aerodynamics and styling are important (automotive, aerospace).
3. Generative Wireframe & Surface Design:
    - Focuses on designing parts using wireframes and advanced surfaces.
    - Combines wireframe geometry and surface modeling for more complex designs, such as structural frameworks or organic shapes.
    - Common in product design requiring high-precision curves.
4. Assembly Design:
    - Combines multiple parts into an assembly.
    - Used to verify that parts fit together, move properly, and function as intended.
    - Can also be used to simulate motion and generate Bills of Materials (BOMs)
5. Sheet Metal & Bent Part Design:
    - Used for parts made from sheet metal.
    - Allows the creation of flat patterns for manufacturing.
    - Supports operations like bending, punching, and forming of metal sheets.

4.2 ENOVIA

ENOVIA is a Product Lifecycle Management (PLM) platform developed by Dassault Systèmes**,** the same company behind CATIA. While CATIA focuses on 3D design and modeling**,** ENOVIA manages all the data and processes associated with a product's lifecycle—from conception to disposal.

How ENOVIA Works with CATIA

 CATIA creates the 3D models, and ENOVIA manages the data behind those models.

 ENOVIA tracks:

- Revisions of CATIA files
- Who made changes?
- When and why changes were made?

 Engineers, designers, and managers can collaborate efficiently using a single source of truth.

Requirement Management

Requirement Management in ENOVIA is a module designed to manage, trace, analyze, and maintain requirements throughout the product lifecycle. This is critical in industries like automotive, aerospace, defense, medical devices**,** and others where compliance, traceability, and quality are essential.

It ensures that what is designed and delivered matches the initial expectations—in function, performance, safety, and compliance

Benefits of Effective Requirement Management

- Prevents scope creep
- Improves product quality
- Reduces costs and rework
- Helps with regulatory audits
- Increases customer satisfaction
- Enhances team collaboration

Project Management

Project Management is the practice of planning, executing, and overseeing a project to meet specific goals, on time and within budget. In ENOVIA, project management is

tightly integrated with product development and PLM (Product Lifecycle Management), enabling real-time collaboration, resource planning, and milestone tracking.

ENOVIA's Project Management capabilities allow organizations to:

- Plan and manage complex projects
- Align product development with business strategy
- Track tasks, resources, and timelines
- Collaborate across teams in real-time

It brings together data, people, processes, and business systems in a unified environment (the 3DEXPERIENCE platform).

Features of ENOVIA Project Management

Table No:4.1 Features of Enovia

Feature	Function
Gantt Chart Planning	Visual planning with dependencies, milestones, and timelines.
Work Breakdown Structure (WBS)	Break projects into manageable tasks and sub-tasks.
Resource Management	Assign and balance workloads across teams and departments.
Milestone Tracking	Monitor critical deadlines and checkpoints.
Change Management Integration	Automatically reflect design or requirement changes in the project timeline.
Risk & Issue Tracking	Identify, log, and mitigate risks or delays.
KPI Dashboards	Real-time visual reporting for performance and progress.
Document & BOM Linking	Link design files, BOMs, and specs to project tasks.
Role-based Access	Control who can see or edit each part of the project plan.

Features of Enovia Project Management is as shown in table 4.1

4.3 DELMIA

DELMIA (Digital Enterprise Lean Manufacturing Interactive Application) is a solution from Dassault Systèmes designed to simulate, plan, and optimize manufacturing and

operations. It's part of the 3DEXPERIENCE platform, closely integrated with CATIA (design) and ENOVIA (data and process management).

DELMIA helps manufacturers and planners:

- Simulate manufacturing processes before actual production.
- Plan workflows, resource usage, and human operations.
- Optimize plant layouts, logistics, and robotic movements.
- Ensure quality, efficiency, and safety in production systems.

DELMIA in a Typical Industry Workflow

 Product Design (CATIA): Engineers design the product.

 Process Planning (DELMIA): Define how each part is manufactured, assembled, or inspected.

 Simulation (DELMIA):

- ❖ Check machine tool paths.
- ❖ Simulate robotic arms or human workers.
- ❖ Optimize workstation layout.

 Execution (DELMIA MES):

- ❖ Track operations on the factory floor.
- ❖ Ensure production stays on target and within quality limits.

What are EBOM and MBOM?

Table No:4.2 EBOM & MBOM

Term	Stands For	Definition
EBOM	**Engineering Bill of Materials**	A structured list of components, parts, and assemblies as designed by engineering (typically created in CAD/PLM tools like CATIA or ENOVIA).
MBOM	**Manufacturing Bill of Materials**	A structured list of materials and components as needed for manufacturing, including extra items like fixtures, packaging, or welds.

The definition of the EBOM & MBOM is as shown in the table 4.2

Benefits of Using DELMIA

- Virtual commissioning: Test production lines digitally before physical setup.
- Integrated with CATIA and ENOVIA for complete digital thread.
- Helps achieve zero-defect manufacturing.
- Supports agile and flexible production planning.
- Drives Industry 4.0 and smart factory initiatives.

4.4 SIMULIA

SIMULIA is a comprehensive suite of simulation software developed by Dassault Systèmes**,** designed to help engineers and designers simulate and test the behavior of products before they are physically built. It integrates with CATIA**,** ENOVIA, and DELMIA as part of the 3DEXPERIENCE platform

SIMULIA provides advanced simulation tools that help product development teams test the behavior of materials, components, and assemblies under various conditions. Its tools allow for Multiphysics simulations (e.g., structural, thermal, fluid dynamics, electromagnetics) and provide insights into product performance, durability, and safety.

1. **Design (CATIA)**: Engineers design the product in CATIA with detailed specifications.
2. **Simulation (SIMULIA)**:
    - Engineers create a virtual prototype.
    - Simulate performance under different conditions (stress, heat, airflow).
    - Iterate designs based on simulation feedback.
3. **Manufacturing (DELMIA)**: Manufacturing processes are planned, and data is handed off to production.
4. **Testing and Validation (SIMULIA)**: Validate the design under real-world conditions before physical testing.

Benefits of Using SIMULIA

 Accelerates product development by virtually testing designs before physical prototypes.

- Reduces costs associated with physical testing and iterations.
- Enhances product performance by identifying issues early in the design process.
- Improves quality and safety through better understanding of product behavior under extreme conditions.
- Optimizes material usage and product weight (especially important in automotive and aerospace industries)

4.5 CATIA Live Rendering

CATIA Live Rendering is a feature within Dassault Systèmes CATIA (Computer-Aided Three-dimensional Interactive Application) software that allows users to create high-quality, photorealistic images of 3D models in real time. It is commonly used in design validation, marketing presentations, and customer reviews to visualize products with realistic materials, lighting, and environments.

Features of CATIA Live Rendering:

1. **Real-Time Photorealism**
   - Uses GPU acceleration (typically via NVIDIA Iray or similar technologies).
   - Updates the rendered image interactively as you change materials, lights, and viewpoints.
2. **Integrated Workflow**
   - Seamlessly integrated into the CATIA environment.
   - No need to export models to an external rendering engine.
3. **Material Library**
   - Includes a library of physically-based materials (metals, plastics, glass, etc.).
   - Allows creation of custom materials with realistic textures and properties.
4. **Lighting and Environment Control**
   - Supports HDRI environments for realistic lighting.
   - You can adjust time of day, light intensity, and reflections interactively.
5. **Support for Realistic Shadows and Reflections**
   - Soft shadows, ambient occlusion, and accurate light bounce contribute to realism.

6. **Multi-GPU Support**
    - Leverages modern multi-GPU setups for faster rendering.
7. **Render Passes and Compositing**
    - Allows export of different render passes for post-production work in tools like Photoshop or After Effects.

Benefits of CATIA Live Rendering

- Real-time photorealistic rendering for instant visual feedback.
- Seamless integration within CATIA—no need for external software.
- Physically accurate materials and textures for realistic surfaces.
- Advanced lighting and environment controls (e.g., HDRI, shadows).
- Accelerates design iterations and decision-making.
- Improves communication with clients and stakeholders.
- Reduces reliance on physical prototypes**,** saving cost and time.
- GPU-accelerated rendering for faster performance.
- High-quality visuals suitable for marketing and presentations.
- Supports multi-GPU setups for enhanced rendering speed.
- Improves cross-team collaboration with clear, lifelike visuals.

4.6 SOLIDWORKS Sculptor

SOLIDWORKS Sculptor is a design tool that enables **organic and freeform modeling** using a **Subdivision (Sub-D) surface approach**. It's part of the **3DEXPERIENCE platform** by Dassault Systèmes, not a standalone SOLIDWORKS feature, but tightly integrated with it. It allows industrial designers and engineers to easily create complex, ergonomic, and aesthetic shapes that are difficult to model with traditional parametric tools.

Features of SOLIDWORKS Sculptor

Subdivision Modeling (Sub-D)

- Create smooth, organic shapes by pushing, pulling, and manipulating surface geometry.
- Ideal for industrial design, consumer products, automotive, and medical devices.

Connected to 3DEXPERIENCE

- Works in the cloud via the 3DEXPERIENCE platform.
- Files can be seamlessly shared with SOLIDWORKS desktop for further refinement.

Hybrid Modeling Workflow

- Combine Sub-D shapes with traditional parametric features.
- Supports transitions from conceptual design to manufacturable geometry.

Cloud-Based & Collaborative

- No software installation required—run in a browser.
- Collaborate in real-time with teams globally.

Push-Pull Interface

- Intuitive, sculpting-like control over the surface.
- No need to define sketches, constraints, or features initially.

4.7 Badges

Fig. 4.1 Associate Badges

The badges earned after completion the courses and certifications are as shown in the fig 4.1

4.8 3DS Certifications

Fig .4.2 Mastering the 3DEXPERIENCE platform Certification- Level 1

Fig .4.3 Be a Swymer Certification- Level 1

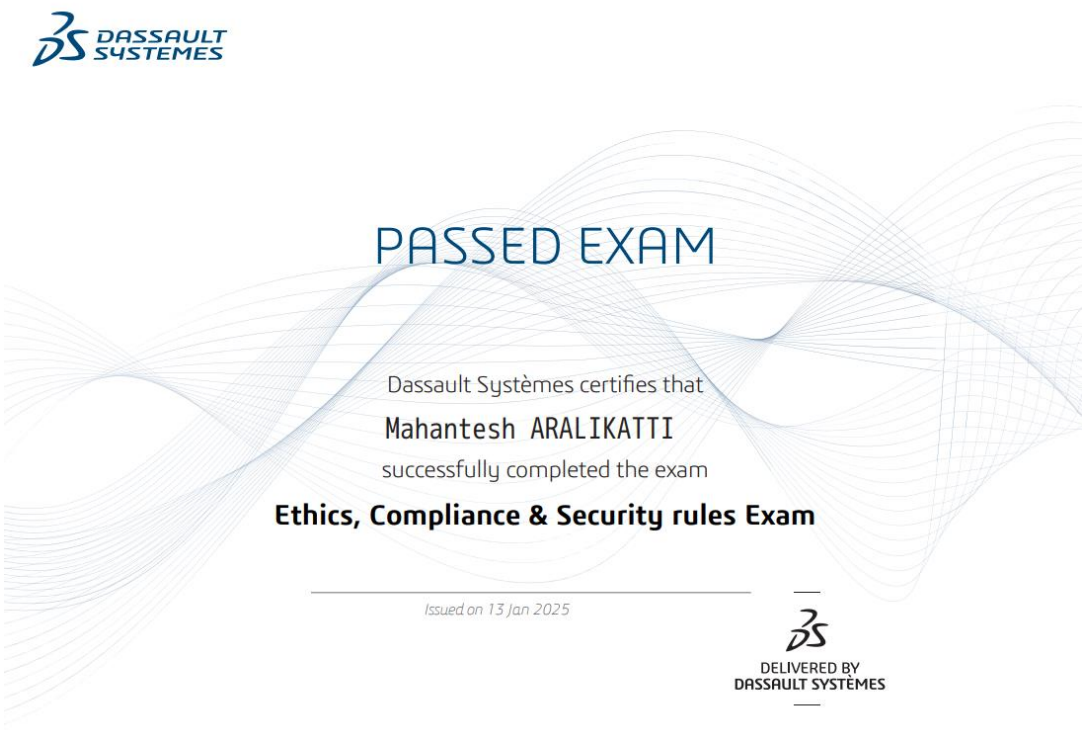


Fig 4.4 Ethics, Compliance & Security rules exam

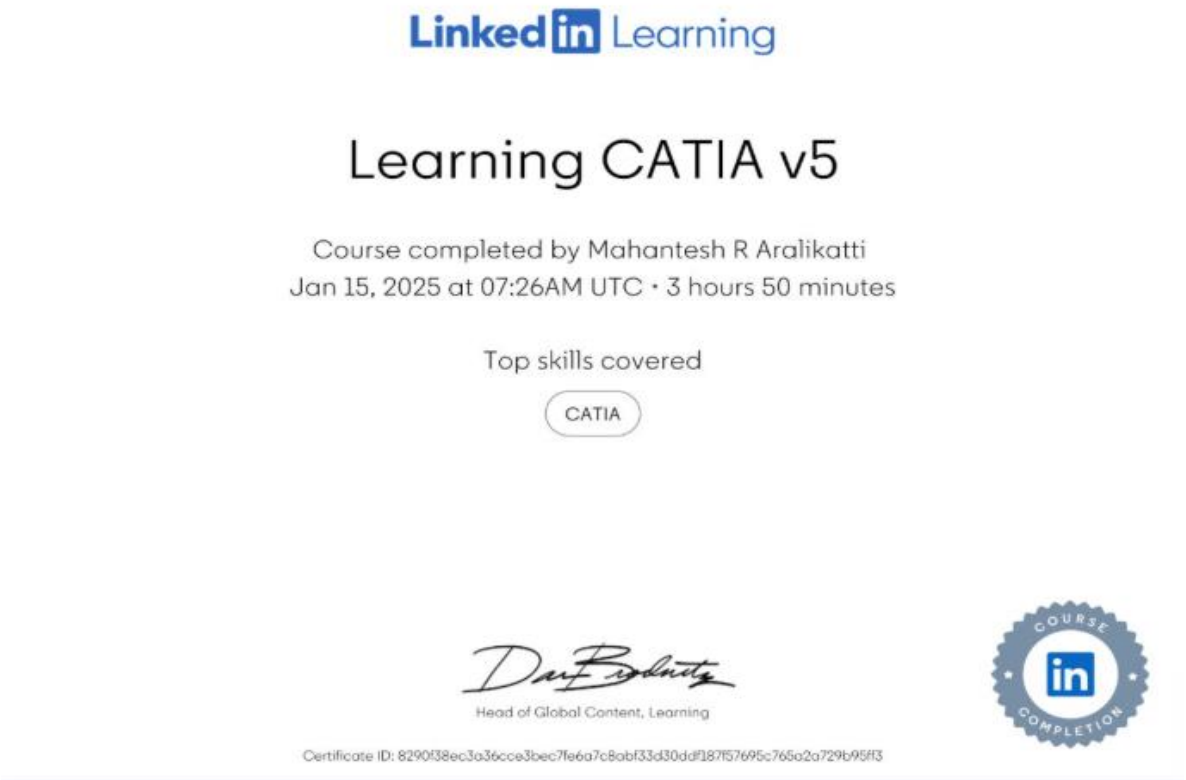


Fig .4.5 Learning CATIA V5 Certification

Fig .4.6 Leading Projects

CHAPTER 5

FINDINGS AND RECOMMENDATIONS

5.1 Findings

1. Dassault Systemes portfolio is comprised of 3D modelling applications, simulation applications creating virtual twins of products or production systems, social and collaborative applications, and information intelligence applications.
2. Dassault Systemes empowers that the employee gets maximum exposure on the tools and technologies before assigning any tasks.
3. Training assists interns to get the maximum knowledge on the products which they are using.
4. Interns are exposed to a variety of knowledge with the best various webinars organized by the organization.

5.2 Recommendations

I was working as a IST Intern in DSGS Industrial Solution Technical team and I was working on Catia Tool. CATIA is an industry-leading 3D design software used by top companies in aerospace, automotive and industrial design. It offers a comprehensive solution for product development, covering everything from design to simulation and manufacturing. With advanced capabilities in 3D modeling**,** surface design, and parametric design**,** CATIA supports a wide range of engineering disciplines, making it ideal for multidisciplinary design projects. It integrates seamlessly with other tools like SIMULIA for simulation and DELMIA for manufacturing, ensuring a smooth workflow from concept to production. CATIA also enhances collaboration through the 3DEXPERIENCE platform, allowing teams to work in real-time, regardless of location. It helps improve product quality, reduce errors, and speed up time-to-market, making it a valuable asset for any design or manufacturing team. With flexible and scalable options, CATIA can meet the needs of both small teams and large enterprises, and it offers free trials and training resources to get started easily

CHAPTER 06

LESSONS LEARNT

During the internship at Dassault Systèmes Global Services, several valuable lessons were gained across technical, professional, and personal development areas:

1. **Hands-on Experience with Industry-Standard Tools:**
   Gained practical exposure to advanced digital engineering tools such as CATIA, ENOVIA, DELMIA, SIMULIA**,** and SolidWorks 3D Sculptor. Each tool was explored for its specialized capabilities—3D modeling, product lifecycle management, simulation, and manufacturing planning—contributing to a comprehensive understanding of the 3DEXPERIENCE ecosystem.
2. **Understanding of Product Lifecycle Management (PLM):**
   Developed a deep understanding of how PLM systems manage data, design processes, and team collaboration from concept to manufacturing. The ENOVIA module, in particular, helped grasp how requirements, changes, and versions are tracked efficiently in a real-world setting.
3. **Model-Based Systems Engineering (MBSE) Approach:**
   Understood how MBSE supports traceability and functional decomposition in large-scale product development, aligning design efforts with customer needs and compliance requirements.
4. **Professional Communication and Teamwork:**
   Improved communication skills through regular interaction with team members and mentors. Participating in meetings and co-curricular sessions provided insights into corporate etiquette, collaboration dynamics, and knowledge sharing.
5. **Ethics and Compliance Awareness:**
   Completed formal training in Ethics, POSH, and Data Security, emphasizing the importance of professional integrity and data protection in the engineering and software industry.

6. **Certification Achievements and Career Readiness:**

   Successfully completed certifications such as CATIA Associate, Enovia Associate, DELMIA Process Engineer, *and* Mastering the 3DEXPERIENCE Platform, all of which significantly boosted confidence and employability in the digital engineering field.

7. **Application of Academic Knowledge to Real Projects:**

   Applied theoretical concepts from mechanical engineering courses to real-world challenges. This bridged the gap between academic learning and industrial practice, enhancing problem-solving and design thinking abilities.

8. **Exposure to Smart Manufacturing and Industry 4.0 Concepts:**

   Learned how Dassault Systèmes is enabling digital twins, virtual testing**,** and collaborative cloud-based engineering, offering a futuristic perspective on smart manufacturing and innovation.

Overall, the internship was an excellent opportunity to learn, contribute, and grow in a professional environment while building a strong foundation in digital product development and lifecycle management.

Chapter 07

EXPERIENCES AT DASSAULT SYSTÈMES GLOBAL SERVICES (DSGS)

The internship experience at Dassault Systèmes Global Services (DSGS) was both technically enriching and professionally transformative. Over the course of the program, active participation in projects, trainings, and team activities offered deep insights into the workings of a global technology leader.

One of the most impactful experiences was working directly with the 3DEXPERIENCE platform, which integrated tools such as CATIA, ENOVIA, DELMIA, SIMULIA, and SolidWorks Sculptor. This exposure enabled real-world application of CAD modeling, simulation, lifecycle data management, and design collaboration—skills that are essential in modern product development.

The structured weekly schedule provided clear learning milestones, starting from onboarding, ethics and compliance training, and progressing into intensive technical modules. The CATIA training sessions—which covered part design, generative shape design, assembly modeling, and sheet metal design—allowed hands-on practice of 3D modeling in an industrial context. Later sessions on ENOVIA and DELMIA expanded the understanding of project management, requirement traceability, and process planning, offering a broader view of digital engineering.

A key highlight was the opportunity to participate in live rendering and 3D sculpting, where real-time product visualization was used to enhance design clarity and stakeholder communication. Additionally, engaging in certification programs like *Mastering the* 3DEXPERIENCE Platform and Be a Swymer helped build credentials and confidence. Interaction with mentors, managers, and cross-functional teams fostered professional growth, improved communication skills, and instilled a sense of accountability. The collaborative and inclusive work environment at Dassault Systèmes encouraged continuous learning and knowledge sharing.

Overall, the internship was an invaluable experience that provided a strong foundation in both technical competencies and workplace readiness, aligning well with industry expectations and future career aspirations.

Chapter 08

CONCLUSION

The internship program at Dassault Systèmes proved to be a valuable and enriching experience. The organization strictly adhered to university guidelines and effectively supported interns in developing domain-specific skills that are essential for future professional growth. The opportunity to undertake the internship and project at a company that actively participates in campus recruitment was a significant advantage.

Dassault Systèmes offered numerous opportunities for learning and exploration across various tools and platforms. At the start of the program, there was limited familiarity with industry terminology and data security policies; however, the company ensured complete compliance with data privacy protocols and client confidentiality requirements. Participation in meetings and co-curricular activities provided valuable exposure to corporate practices and collaborative environments.

Throughout the internship, several industry-standard tools were explored and utilized, including CATIA, ENOVIA, DELMIA, SIMULIA, and SolidWorks. The experience greatly contributed to the enhancement of both technical competencies and communication skills. The work assigned was closely aligned with the intern's academic specialization, enabling the practical application of theoretical knowledge.

Dassault Systèmes, recognized for its dynamic and fast-paced work culture, consistently delivers innovative and effective engineering solutions. The internship environment was highly supportive, with managers and team members readily available for guidance and collaboration. The overall experience was positive, and the internship duration was effectively utilized, contributing meaningfully to both professional development and career readiness.

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