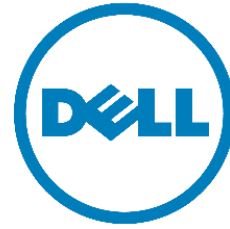




Dr. Vishwanath Karad
**MIT WORLD PEACE
UNIVERSITY | PUNE**
TECHNOLOGY. RESEARCH. SOCIAL INNOVATION & PARTNERSHIPS



**An Internship Report Submitted to
DR. VISHWANATH KARAD
MIT WORLD PEACE UNIVERSITY**

**Submitted by,
Dhairvi Shah (1032230299)**

**Under the supervision of
Atul Bavdhankar and
Preeti Kale**

**School of Computer Science and Technology
MIT World Peace University, Pune
Kothrud, Pune-411038
(Period from 1st July 2024 to 27th June 2025)**



25 February 2024

Dhairvi Shah
Pune Girls Hostel, Cummins college road, Karvenagar, Pune
Pune Maharashtra 411052
India

Private & Confidential

Dear Dhairvi,

INTERNSHIP AGREEMENT

As part of the course curriculum in pursuance of your degree at your College, you had represented that you are required to complete a project assignment with Dell International Services India Pvt Ltd (7451) (Dell or "the Company").

You have been approached to do the said Project with Dell in **Pune, India** and Dell is pleased to offer you an Internship with effect from **1 July 2024 to 27 June 2025**.

The Terms and conditions of your Internship shall be as follows:

- a) You will be assigned a Project Guide during your internship with Dell. The details about your project will be provided to you upon you joining the Internship with Dell. You are expected to apply your best degree of professional, technical and administrative skills and experience, work diligently and evidence care and economy in the use of office equipment and supplies. Your progress will be reviewed from time to time by your Project Guide.
- b) The deliverables of your Project shall be as detailed in Annexure to this Agreement.
- c) You will be paid a consolidated monthly stipend of **Rs 35,000.00** (the "**Stipend**") during your internship at Dell. Statutory withholdings and taxes as applicable shall be deducted from your monthly Stipend. You will not be entitled to any of the other Benefits assigned to employees of Dell.
- d) **Core Business Hours:** Your working hours shall be the number of hours as the Company may from time to time deem appropriate and as may be necessary to achieve the purposes of the Company (inclusive of a lunch break). Please take note that certain functions such as Sales, Technical Support, Manufacturing, Information Services require staggered/shift hours.
- e) **Code of Conduct:** Dell looks forward to the application of the best of your skills and experience, during your Internship with Dell. In addition, at all time during your Internship with Dell, you shall comply with Dell's Code of Conduct that has been attached in this mail, as applicable from time to time.
- f) **Confidentiality Obligation:** You will not use, publish, misappropriate or disclose any "Confidential or Proprietary Information", during or after your internship, except as authorized / approved in writing by Dell. Such Information shall include what you learn or originate during your Internship, which is not available or readily ascertainable from public sources, and includes such information disclosed by others in confidence to Dell. If in doubt, you will promptly consult your Project Guide at Dell. Confidential and Proprietary Information includes, but is not necessarily limited to, the information described in subparagraphs below.



i. Computer products, Dell's processes and device strategies planned or under development, including device specifications, system architecture, logic designs, circuit implementations and plans for unannounced and announced products;

ii. Software products in use, planned or under development, including operating systems adaptations or enhancements, language compilers, interpreters and translators, system design and evaluation tools, and application programs;

iii. Information relating to Dell's employees; actual and anticipated relationships between Dell and other companies; sales levels, profit levels, pricing and other unpublished financial data; and budget, staffing, compensation, equipment and related plans; Information relating to Dell's customer and vendor relationships. This includes performance requirements, development and delivery schedules, device and product pricing and quantities, and other information communicated to Dell by customers or vendors. You will not use in your Internship or disclose to Dell any confidential or proprietary information of a third party unless Dell first receives written authorization from the third party allowing the use or disclosure of such information and unless Dell agrees in writing to receive such information on terms acceptable to Dell. You will abide by the restrictions imposed on the disclosure and use of such third party information.

You acknowledge that a violation of the provisions of this Agreement dealing with Confidential and Proprietary Information and Intellectual property may cause significant harm to Dell and that remedies at law may be inadequate to protect against a breach of such provisions. Accordingly, you agree that Dell shall be entitled, in addition to any other relief available to it, to the granting of injunctive relief without proof of actual damages or the requirement to establish the inadequacy of any of the other remedies available to it. You agree not to assert any defense in proceedings regarding the granting of any injunction or specific performance based on the availability to Dell of any other remedy.

g) Data Protection: Dell will obtain, hold and use personal data relating to you in the context of your Internship, including, but not limited, your name, number, address, emergency contact details (e.g. home telephone number), educational details/ history/ qualifications and any other internship history done earlier, Internship Project description.

The purposes of such processing are to administer and manage the internship relationship Dell shall have with you, and may include disaster recovery data duplication, paying Stipends, Internship development and training, regulatory and legal compliance, carrying out activities related to compliance with Dell's policies and procedures, providing references and information to future your employers, governmental and regulatory agencies (includes tax, social security authorities) in a take-over or merger, providing information to a future purchaser or potential purchaser of Dell or any part of Dell's business or a potential or future service provider as part of due diligence. You hereby consent to such data processing by Dell, any other Dell company or any third party charged with providing services, information or benefits related to the internship and you further consent to transfer of data to a Dell company or third party even if such company or third party is situated outside India in a country which does not offer a level of data protection compared to the level applied in India. Dell will put in place adequate safeguards with such third parties to ensure an adequate level of data protection.

h) **Intellectual Property and Copyright:** During your Internship with Dell, you will promptly disclose to Dell, all Intellectual Property developed by you, solely or jointly with others, in the course of your Internship. Intellectual Property includes each discovery, idea, improvement, or invention you create, conceive, develop or discover, alone or with others, which relates to Dell's business or results from the use of Dell's equipment, supplies, facilities, or information. All Intellectual Property, in whatever form, is Dell's property. You will assign and agree to assign to Dell and its nominees, without additional compensation, all of your worldwide and perpetual rights in Intellectual Property. You will assist Dell in all ways, including giving evidence and executing any documents deemed helpful or necessary by Dell to establish, perfect, and register worldwide, at Dell's expense, such rights in Intellectual Property. You will not do anything in conflict with Dell's rights in Intellectual Property and will cooperate fully to protect Intellectual Property against misappropriation or infringement by third parties. If you come across any cases of infringement of the rights of Dell in its Intellectual Property, you will promptly notify Dell of such Infringement and assist Dell in all ways to protect its Intellectual Property.

You hereby agree that Dell will be the copyright owner in all works of every kind and description created or developed by you, solely or jointly with others, in connection with any work with Dell. If requested to, and at no further expense to Dell, you will execute in writing any acknowledgments or assignments of copyright ownership of such Copyrightable Works as may be appropriate for preservation of the worldwide and perpetual ownership in Dell and its nominees of such copyrights.

On the date your internship with Dell ends, you will promptly deliver to a designated representative of Dell all originals and copies of all materials, documents and property of Dell which are in your possession or control. You will also cooperate in conducting your exit with a designated representative of Dell. The purpose of the exit meeting will be to review confidential and proprietary information known or possessed by you and to confirm Dell's rights regarding non-solicitation, the protection of the confidential and proprietary information and the disclosure to Dell and its ownership of intellectual property.

i) **Network Usage:** You shall comply with applicable Dell regulations relating to the usage of Dell Network.

j) Nothing in this arrangement can be construed to create an employer – employee relationship between Dell and you. You do not have any authority to assume or create any obligation or liability of any kind on behalf of Dell.

k) **Misconduct -** If at any time during your Internship, in the opinion of the management of Dell, which shall be final and binding, you are involved in or found guilty of dishonesty, negligence or indiscipline in discharge of your duties or any other conduct considered by the management of Dell to be detrimental to the interests of Dell, or in violation of one or more terms of this Agreement, then your Internship with Dell shall be liable to be terminated with immediate effect, without any payment of Stipend thereof.

l) This Agreement shall be governed by Indian Law. The Courts at Bangalore shall have exclusive jurisdiction to settle any disputes.

Regards,



Santosh TK
Talent Acquisition Director

Verified by
Tanmay.Patgiri@Dell.com
Tanmay Patgiri
Advisor, Talent Acquisition

**Health and safety**

By accepting the terms and conditions of this internship agreement you hereby agree to abide by all rules regarding Health, Safety requirements and other policies of the Company. You are responsible for your own safety and the company is not in any way liable for any damage caused to you owing to your negligence or lack of due care in performance of your internship activity at Dell.

Acceptance

In accepting the internship with Dell, I hereby agree to abide by the terms and conditions set out in the above and all policies and regulations of Dell as may be amended from time to time.

Signature: *Dhairvi Shah* Feb 27, 2024
DhairviShah (Feb 27, 2024 18:43 GMT+5.5)

Email: dhairvishah2911@gmail.com

Dhairvi Shah

Acknowledgments

I would like to express my sincere gratitude to **Dr. Vishwanath Karad MIT World Peace University** for imparting the core values that have shaped my academic and professional journey. I am especially thankful for the opportunity to undertake an internship, which eventually paved the way for my association with **Dell Technologies**.

I extend my heartfelt thanks to **Dell Technologies** for providing me with an invaluable internship experience. I am particularly grateful to my manager, **Mr. Atul Bavdhankar**, and my mentor, **Mr. Satish Bhosikar**, for their constant guidance, support, and encouragement. Their mentorship was instrumental throughout my journey, helping me navigate every step with confidence.

I would also like to express my appreciation to my college mentor, **Dr. Preeti Kale**, for her continued support and guidance during this period.

My sincere thanks to my **team members at Dell Technologies**, who made my onboarding process smooth and collaborative, enriching my experience from day one.

Finally, I would like to thank my family for their unconditional love and support. Their encouragement has been my greatest strength. I am equally grateful to my friends for always standing by me and cheering me on through every milestone.

Contents

1. Introduction
2. Internship Details
3. Aim, Objective & Scope
4. Onboarding & Orientation
5. Learnings
6. Project Experience
7. Innovations and Contributions
8. Challenges Faced
9. Collaboration and Team Dynamics
10. Personal Growth and Learning
11. Conclusion
12. Recommendations
13. Take Aways

1. Introduction

Internships are an integral part of vocational education, acting as a stepping stone between educational study and practice in the industry. They allow students to implement theoretical knowledge in a real-world environment, acquire relevant skills for the industry, and learn about organizational functions. This report outlines my internship experience at Dell Technologies, a global technology giant, as an intern in Pune, India, from July 1, 2024, to June 27, 2025.

The goal of the internship was to enhance my technical proficiency, see real-life project development processes, and learn the practical challenges of data management within a tech-driven organization. My task entailed involvement in onboarding activities, technical training, and active engagement in all stages of project development such as testing and validation.

Dell Technologies' focus on innovation and learning helped to create a vibrant platform for career development. Through the internship, I broadened my understanding of emerging technologies including cloud computing, data management solutions, and agile methodologies, while gaining valuable soft skills such as teamwork, communication, and problem-solving.

This report presents a formal account of my internship, including the objectives undertaken, skills learnt, projects engaged in, and general effect of this experience on my own professional growth. It also considers the problems faced and the lessons gained, providing reflective evaluation of my experience towards a career in the tech industry.

2. Internship Details

- ❖ **Company Name:** Dell Technologies
- ❖ **Location:** Pune, India
- ❖ **Mode of Work:** On-site
- ❖ **Internship Duration:** July 1, 2024 – June 27, 2025 (1 year)
- ❖ **Internship Type:** Campus-based Internship
- ❖ **Product:** Power Protect Data Manager
- ❖ **Department:** Information Storage Group
- ❖ **Role/Designation:** Intern – [Software Engineer]
- ❖ **Reporting Manager:** Mr. Atul Bavdhankar
- ❖ **Company Mentor:** Mr. Satish Bhosikar
- ❖ **College Mentor:** Dr. Preeti Kale
- ❖ **Status:** Successfully converted to Full-Time Employment (FTE Placement)

3. Aims, Objectives, and Scope

3.1 Aims:

The primary aim of this internship was to bridge the gap between academic learning and practical industry experience. Interning at Dell Technologies provided exposure to real-time projects, agile team environments, and industry-standard practices, fostering both technical and professional development.

Key Aims:

- ❖ To gain hands-on experience in managing the project lifecycle within a multinational technology organization.
- ❖ To apply theoretical knowledge in real-world scenarios and develop technical proficiency.
- ❖ To understand corporate processes, team collaboration models, and agile methodologies.
- ❖ To build a working knowledge of data integrity, system validation, and testing frameworks.
- ❖ To enhance both technical and interpersonal competencies through project involvement and guided mentoring.

3.2 Objectives

The internship was designed to achieve defined learning and performance outcomes aligned with academic requirements and organizational expectations. Emphasis was placed on skill-building, project contribution, and continuous professional growth.

Key Objectives:

- ❖ To develop proficiency in tools and technologies such as Agile, Scum@Scale, Java Spring Boot, Python, XML, SQL and many more.
- ❖ To actively contribute to the development, testing, and documentation phases of assigned project modules.
- ❖ To cultivate analytical thinking and structured problem-solving through practical task execution.
- ❖ To collaborate effectively within cross-functional teams and enhance communication skills.
- ❖ To understand and implement quality assurance and validation protocols in alignment with industry standards.

3.3 Scope

The scope of the internship included a variety of responsibilities across technical and managerial domains. This involved active participation in software development, testing, data analysis, and project coordination, along with exposure to the workflow and quality standards of a global enterprise.

Key Scope Areas:

- ❖ Participation in software development tasks, including code review and system verification.
- ❖ Engagement in agile project activities such as sprint planning, daily stand-ups, and iterative delivery.
- ❖ Execution of data-related tasks involving data validation, analysis, and reporting.
- ❖ Collaboration with business analysts, developers, and quality assurance teams on project deliverables.
- ❖ Familiarization with corporate documentation standards, compliance requirements, and internal quality protocols.

4. Onboarding & Orientation

4.1 Onboarding

The onboarding process was designed to ensure a smooth transition into the corporate environment at Dell Technologies. It focused on administrative setup, technical readiness, and familiarization with organizational policies.

Key Onboarding Activities:

- **Hardware and System Allocation:** Received a company laptop and necessary accessories, ensuring all hardware requirements were in place for seamless work.
- **Credential Setup:** Created and configured the official Dell email ID and user account to gain access to internal portals and systems.
- **Policy Briefing:** Underwent an orientation on corporate policies, workplace ethics, security protocols, and code of conduct.
- **Infrastructure Access:** Provided access to VPN, intranet resources, and essential tools required for daily operations and communication.
- **Team Allocation:** Assigned to a specific team along with introductions to reporting managers and mentors for guidance throughout the internship.
- **Software Onboarding:** Installed and received training on tools and software platforms relevant to our project, enabling an understanding of the technical stack and workflows.

4.2 Orientation

The orientation phase was designed to provide a broader understanding of Dell Technologies' organizational structure, values, and operational dynamics. It facilitated early engagement and cultural integration.

Key Orientation Activities:

- **Office Tour:** Conducted a guided tour of the office facilities to understand the physical layout and work environment.
- **Department Overviews:** Introduced to various business units, departments, and their functions to understand Dell's end-to-end business model.
- **'Interns Meet and Greet' Session:** An interactive session aimed at helping interns connect with each other, share backgrounds, and build rapport.
- **Leadership Introduction:** Received welcome messages from senior leaders and managers, sharing insights into the company's vision, culture, and expectations.

- **Business Overview Presentations:** Attended introductory sessions that covered Dell's major products, services, client base, and market positioning.
- **Workplace Tools Familiarization:** Demonstrated internal communication and project management platforms like MS Teams, Confluence, and Jira.

5. Learnings

5.1 Technological Learnings:

This encompasses the technical platforms and tools that are the nuts and bolts of software development and collaboration in today's times. I had hands-on practical experience with tools such as Jira (project management), Java, Spring Boot, Maven (build automation), and Confluence (team collaboration and documentation). These tools played a crucial role in automating development processes and team productivity.

5.2 Product-Based Learnings

This is product and platform-based learning at Dell Technologies. I was trained on virtualization, operating systems (Windows, Linux), native reporting, and PowerProtect Data Manager. These are the technologies that are used in data management, system administration, and enterprise-class virtualization solutions.

5.3 Skill Development:

While undertaking the internship, I acquired several technical and programming skills, including SQL, Python, Shell scripting, XML, Java, and Windows Subsystem for Linux (WSL) development. These are required for efficient data manipulation, automation, and back-end development across different system environments.

5.4 Process Learnings:

These encompass methods that structure the implementation of a project and teamwork. I was heavily exposed to Scrum@scale methods and Agile principles, which promote iterative development, adaptive planning, and communication in uncertain project environments.

Conclusion: These has together created a broad internship experience. By combining technological competencies, product knowledge, key technical skills, and current development methodologies, I have laid a strong platform for transitioning from academic studies to professional application in the technology field.

6. Project Experience

- Adaptation to Dell's Corporate Culture:
 - Seamlessly transitioned from academic life to a professional setting, quickly becoming proficient in Dell's culture and values, fostering collaboration and innovation across teams.
- Agile Methodology Engagement:
 - Actively participated in learning and applying Agile methodologies, gaining hands-on experience in structured workflows, sprint planning, and efficient project management, contributing to high-performing team dynamics.
- Innovation Sprint Participation:
 - Contributed as a participant in Dell's Innovation Sprint, encouraging creativity and forward-thinking, driving impactful solutions in a time-constrained, high-energy environment.
- INNOhack Finalist:
 - Reached the finalist stage in Dell's INNOhack, a specialized hackathon event for interns, demonstrating strong problem-solving abilities, teamwork, and an innovative mindset under pressure.
- Codeium Development and Testing Contributions:
 - Leveraged Codeium's features (Explain, Generate, and Search) to enhance the product's functionality, improving user experience through more accurate and efficient features.
 - Focused on increasing product resiliency by addressing critical user stories, including aspects of product security, supportability, and data validation.
- Product Resiliency and Security Enhancements:
 - Contributed significantly to enhancing product resiliency by identifying and resolving key security vulnerabilities and implementing improvements for better supportability and scalability.

7. Innovations and Contributions

- **Increasing Product Resiliency:**
 - Focused on enhancing the stability and reliability of the product by addressing significant user stories related to resiliency, ensuring the system's robustness and long-term sustainability.
- **Product Security:**
 - Contributed to the security improvements of the product, focusing on data protection and secure communication protocols, enhancing the overall safety and trustworthiness of the product.
- **Data Validation and Testing:**
 - Played a critical role in data validation tasks, ensuring the accuracy, consistency, and integrity of data within the product, and contributed to testing activities to ensure the quality and performance of new features.
- **Enhancing Reporting and Data Migration:**
 - Enabled smoother data migration and enhanced reporting features, offering better insights and more effective decision-making tools for users, stakeholders, and the organization.
- **Data Migration and Reporting Functionality:**
 - Played one of the key roles in facilitating data migration tasks, ensuring smooth data transfer processes, while also enhancing reporting functionalities, offering more insightful and reliable data for stakeholders.
- **Security Improvement with TLS Integration:**
 - Assisted in strengthening product security by enabling TLS (Transport Layer Security), ensuring encrypted and secure communication for data integrity.

8. Challenges Faced

- Grasping Agile methodologies, particularly Scrum@scale, and adapting to its iterative nature.
- Balancing multiple job-related responsibilities
- Enhancing product security and resiliency by addressing vulnerabilities and integrating new features.
- Troubleshooting performance bottlenecks related to data processing and reporting functionalities.
- Intra-team collaboration and aligning priorities.

9. Collaboration and Team Dynamics

- Intra-functional Teamwork
 - Collaborated with developers, testers, and product managers, participating in Scrum Standups and Sync-Up sessions to ensure alignment with project goals and progress tracking.
 - Shared progress on individual tasks and participated in discussions regarding issues faced during development and deployment.
- Knowledge Sharing and Feedback
 - Engaged in knowledge-sharing activities with team members, especially on complex issues such as Enhancements to existing framework, new features and system integration.
 - Actively participated in reviewing pull requests (PRs) and providing constructive feedback on code and system design.
- Agile Methodology
 - Followed Agile principles by breaking tasks into manageable user stories and tracking progress through QTest and Jira. This approach allowed for regular iterations, feedback loops, and timely releases.
 - Contributed to sprint planning and retrospectives, offering insights into task prioritization and identifying bottlenecks in the development process.

10. Personal Growth and Learning

Technical Skills Development

- Gained proficiency in key technologies such as Java, Spring Boot, and PPDM architecture, improving my technical skills in both backend development and reporting system configuration.
- Deepened my understanding of data migration strategies, including designing and validating scripts for legacy system integration.

Problem-Solving and Debugging

- Enhanced my debugging skills through hands-on troubleshooting of complex issues related to scheduled reports, data integrity, and system performance.
- Developed strong problem-solving abilities, particularly when working through complex technical challenges that required careful analysis and testing.

Collaboration and Communication

- Improved my communication skills by regularly participating in team meetings, providing updates, and discussing challenges. Collaborating with cross-functional teams allowed me to learn how to work efficiently in a team-oriented environment.
- Increased my ability to manage time and tasks effectively within an Agile framework, allowing me to balance multiple priorities and contribute effectively to team goals.

Exposure to Industry Practices

- Gained hands-on experience with industry-standard tools such as Git, QTest, and Jira, enhancing my understanding of software development workflows.
- Engaged in containerization (Docker), CI/CD practices, and system monitoring tools, broadening my understanding of the full software development lifecycle.

11.Conclusion

My internship at Dell Technologies has been an invaluable experience, contributing significantly to both my technical and professional growth. Throughout this journey, I gained practical experience in software development, testing, and data management, while being exposed to cutting-edge technologies like Java, Spring Boot, and Agile methodologies. I was able to apply theoretical knowledge to real-world scenarios, refining my skills in data migration, product security, and system integration.

Key takeaways from this experience include:

- **Technical Competence:** I significantly enhanced my understanding of backend technologies and reporting systems, gaining hands-on experience with data integrity, system verification, and security enhancements.
- **Agile Experience:** I developed proficiency in Agile methodologies, collaborating effectively in sprint-based environments, and contributing to timely project deliverables.
- **Problem-Solving:** The challenges faced in troubleshooting and debugging complex issues sharpened my problem-solving abilities, equipping me with practical skills to navigate the fast-paced and often unpredictable nature of software development.
- **Collaboration and Communication:** Working with cross-functional teams honed my communication skills and deepened my understanding of how collaboration drives success in technology projects.
- **Industry Insights:** Exposure to industry-standard tools, practices, and frameworks provided me with a holistic view of the software development lifecycle, preparing me for a seamless transition into the workforce.

Overall, this internship not only bolstered my technical expertise but also helped me understand the dynamics of working in a large, innovative organization like Dell Technologies. The experience has affirmed my passion for pursuing a career in the tech industry, and I am eager to continue applying the lessons I've learned as I transition into full-time employment with Dell Technologies.

12.Recommendations

- **Agile Mastery:** Continue enhancing Agile skills by practicing sprint planning and task prioritization in mock projects.
- **Collaboration:** Foster clear communication with cross-functional teams through regular check-ins and shared goal setting.
- **Effective Knowledge Transfer:** Organize structured and interactive KT sessions with hands-on examples to facilitate smoother onboarding for new team members.
- **AI Training Sessions:** The exsisting AI sessions provided the basic platform for AI learnings but more detailed as well as applicable AI Sessions would be more suitable.

13. Take Aways









Internship Approval Statement

I, Atul Bavadhankar, serving as the Manager and Supervisor of Ms. Dhairvi Shah, a student at Dr. Vishwanath Karad MIT World Peace University, hereby confirm that the content presented in the attached report has been reviewed and is accurate to the best of my knowledge. I acknowledge that the tasks and learning outcomes described therein are a true reflection of the work undertaken during the internship period.

I fully endorse this report as valid documentation of Ms. Dhairvi Shah's internship and authorize the university to consider it for fulfilling the academic requirements necessary for the completion of her degree program.



Atul Bavadhankar

Director, Software Engineer