

# A Comprehensive Analysis of Autoscaling Metrics in the Cloud

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## ABSTRACT

Ayurveda is the ancient science of life, has eight branches. According to Ayurved there are two main types of poison – Natural and Artificial. Natural poison is of two types – Sthavar and Jangam. <sup>(1)</sup> Danstrachikita is a Ayurveda toxicology branch. Insect bite is comes under Jangam Visha. A 9 year boy, while playing cricket affect with unknown insect bite complying of itching, swelling, redness and burning pain over upper back region. He was treated by local application of Bilvapatra Lepa (Aegle marmelos). Aegle marmelos is one of the important plants which have medicinal as well as other properties. This study shows that external application of Bilvapatra Lepa is effective in the treatment of unknown insect bite (Kitakadansha)

**Keywords:** Aegle Marmelos, Bilvapatra Lepa, Insect bite.

## INTRODUCTION

### History

Bilva is a deciduous sacred tree, associated with Gods having useful medicinal properties, especially as a cooling agent. This tree is popular in ‘Shiva’ and ‘Vishnu’ temples and it can be grown in every house. Its leaves are trifoliolate symbolizing the ‘Trimurties’ – Brahma, Vishnu, Shiva with spear shaped leaflets resembling “trishulam” the weapon of Lord Shiva. Many legends, stories and myths are associated with this tree. The leaflets are given to devotees as ‘prasadam’ in Shiva temples. <sup>(2)</sup>

### Habitat

Found all over India, from sub-Himalayan forests, Bengal, Central and south India and in Burma. Two kinds of fruits are available in the market. The full grown fruit of either variety, when it just begins to ripen, is best for medicinal purpose. <sup>(3)</sup>

### Botanical Inforation <sup>(4)</sup>

#### Bark

The bark is pale brown, smooth or finely fissured and flaking, armed with long straight spines, 1.2 – 2.5 cm singly or in pairs, often with slimy sap oozing out from cut parts. The gum is also described as a clear, gummy sap, resembling gum Arabic, which exudes from wounded branches and hangs down in long strands, becoming gradually solid. It is sweet at first taste and then irritating to the throat.

#### Leaf

The Leaf is trifoliolate, alternate, each leaflet 5-14 x 2-6 cm, ovate with tapering or pointed tip and rounded base, untoothed or with shallow rounded teeth. Young leaves are pale green or pinkish, finely hairy while mature leaves are dark green and completely smooth. Each leaf 4-12 pairs of side vein which are joined at the margin.

#### Flower

The flowers are 1.5 to 2 cm, pale green or yellowish, sweetly scented, bisexual, in short drooping unbranched clusters at the end of twinges and leaf axils. They usually appear with young leaves. The calyx is flat with 4 (5) small teeth. The four or five petals of 6-8 mm overlap in the bud. Many stamens have short filaments and pale brown, short style anthers. The ovary is bright green with an inconspicuous disc.

#### Fruit

The bael fruit typically has a diameter or between 5 and 12 cm. It is ball shaped or slightly pear-shaped with a thick, hard rind and does not split upon ripening. The woody shell is smooth and green, gray until it is fully ripe when it turns yellow. Inside are 8 to 15 or 20 sections filled with aromatic orange pulp, each section with 6(8) to 10(15) flattened-oblong seeds each about 1 cm long, bearing woolly hairs and each enclosed in a sac of adhesive, transparent mucilage that solidifies on

drying. The number of seeds varies. It takes about 11 months to ripen on the tree and can reach the size of large pomelo, and some are even larger. The shell is so hard it must be cracked with a hammer.

#### Classification <sup>(5)</sup>

Gana	Authour
Guduchyadi	Bhavaprakasha
Shothahar	Charaka
Arshoghna	
Asthapana	
Anuvasanopaga	
Bruhatpanchamul	Sushruta
Varunadi	

#### Synonyms <sup>(6)</sup>

Bilva	Shailusha	Shandilya
Malur	Shriphala	Shiveshta
Tripatra	Shalya	Gandhaphala
Gandhapatra	Sadaphala	Kapittha
Pitaphala	Putivata	Shalatu
Kantaki		

#### Regional Names <sup>(7)</sup>

Language	Name
English	Bael fruit, Bengal Quince
Latin Name	Aegle marmelos
Marathi	Beal
Bangali	Beal
Hindi	Beal, Shriphala
Gujrathi	Bili
Telagu	Maredu, Bilvapandu

#### Plant Profile – Taxonomy <sup>(8)</sup>

Kingdom	Plantea
Order	Sapindales
Family	Rutaceae
Sub family	Aurantioieae
Genus	Aegle
Species	A.marmelos

### CHEMICAL CONSTITUENTS

#### Alkaloids

The alkaloids comprise the largest single class of secondary plant substances. From the leaves of Aegle marmelos, new alkaloids were reported.

#### Ethyl Cinnamamide

O-3,3-(dimethylallyl) harfordinol

N-2-methoxy-2-[4-(3',3'-dimethylallyloxy)phenyl] ethyl cinnamamide etc.<sup>(9)</sup>

#### Coumarins

Marmelosin, marmesin, imperatorin, marmin, alloimperatorin, methyl ether, xanthotoxol, scopoletin scoparone, umbelliferon, psoralen, maemelide has also been reported in Aegle marmelos.<sup>(10)</sup>

## **Terpenoids**

In India study of the essential oil of *Aegle marmelos* leaves was done very much extensively in India by various workers since 1950.  $\alpha$ -Phellandrene was the common constituents of the essential oil found from leaves, twigs and fruits.  $\alpha$ -Phellandrene (56%) and p-cymene (17%) were reported from leaf oil. Later, similar report was published on leaf essential oil by many workers. P-menth-1-en-3,5-diol was isolated and characterized from *Aegle marmelos* leaves. <sup>(11)</sup>

## **Pharmacological Properties of Leaves**

### **Cytoprotective Activity**

The cytoprotective activity of leaves of *Aegle marmelos* was reported in *Cyprinus carpio* (freshwater fish) exposed to heavy metals. *C. carpio* was exposed to heavy metals followed by treatment with dried powder of *Aegle marmelos* leaves. The treatment resulted in cytoprotective activity by stabilization of plasma membrane and modulation of antioxidant enzyme system. <sup>(12)</sup>

### **Anti-arthritis Activity**

Study has shown that leaves of *Aegle marmelos* have ability to possess anti-arthritis activity against collagen induced arthritis in Wistar rats. Paw swelling and arthritic index has reduced from the methanol extract treatment of rats. Radiological and histopathological changes were also significantly reduced in methanol extract treated rats. <sup>(13)</sup>

### **Antibacterial activity:**

Antimicrobial activity of different leaf extracts such as Petroleum ether, Dichloromethane, Chloroform, Ethanol and Aquas extract of *Aegle marmelos* leaves are tested against selected Gram positive and Gram negative bacteria. Phytochemical extracts of *Aegle marmelos* exhibited significant anti-bacterial activity as depicted from results. Ethanol and Chloroform leaf extracts of *Aegle marmelos* were found to be more active towards the bacterial species tested. <sup>(14)</sup>

### **Antidiabetic activity**

The anti-diabetic activity of the leaves of *Aegle marmelos* was reported in alloxan diabetic rats. The methanolic extract (120 mg/kg body wt.ip) of the leaves of *Aegle marmelos* reduced the blood sugar level. Reduction in blood sugar level could be seen from 6<sup>th</sup> day after continuous administration of the extract and on 12<sup>th</sup> day sugar levels were found to be reduced by 54%. <sup>(15)</sup>

### **Anti-fertility activity**

In male Albino rats, leaves of *Aegle marmelos* plant were investigated for antifertility activity. The rats were administered with aqueous extract (250/kg.body weight) of leaves of *Aegle marmelos* for 45 days. Treatment resulted in reduction of testis, epididymis and seminal vesicle. The extract also resulted in reduction of testicular sperm count. <sup>(16)</sup>

### **Anti-inflammatory, Antipyretic and Analgesic**

The serial extracts of leaves of *Aegle marmelos* Corr. were investigated for anti-inflammatory property. The analgesic and antipyretic properties were also evaluated. The most of the extracts derived from the plant *Aegle marmelos* caused a significant inhibition of the carrageenan-induced paw oedema and cotton-pellet granuloma in rats. The extract also produced marked analgesic activity by reduction the early and late phases of paw licking in mice. A significant reduction in hyperpyrexia in rats was also produced by the most of the extracts. This study was established anti-inflammatory, antinociceptive and antipyretic activities of the leaves of *Aegle marmelos*. <sup>(17)</sup>

### **Acute and Sub-acute toxicity studies:**

This study was designed to elucidate the toxicity of the widely used plant *Aegle marmelos* in rats. The total alcoholic, total aqueous, whole aqueous and methanolic extracts isolated from the leaves of *A. marmelos* and studied their toxic effects. Acute, subacute and LD 50 values were determined in experimental rats. The dead animals were obtained from primary screening studies, LD 50 value determination experiments and acute studies subjected to postmortem studies. The external appearance of the dead animals, the appearance of viscera, heart, lungs, stomach, intestine, liver, kidney, spleen and brain were carefully noted and any apparent and significant features or differences from the norm were recorded. Following the chronic administration of *Aegle marmelos* for 14 days, the vital organs such as heart, liver, kidney, testis, spleen and brain were carefully evaluated by histopathological studies and any apparent and significant changes or differences from the norms were studied. From the acute administration of *Aegle marmelos*, the LD50 values were determined using graphical method. The heart stopped in systolic stand- still in the acute experiments. There were no remarkable changes noticed in the histopathological studies after 50 mg/kg body wt of the extract of *Aegle marmelos* when administered intraperitoneally for 14 days successively. Pathologically, neither gross abnormalities nor histological changes were observed. After calculation of LD50 values using graphical methods, we found a broad therapeutic window and a high therapeutic index

value for Aegle marmelos extracts. Intraperitoneal administration of the extracts of the leaves of Aegle marmelos at doses of 50, 70, 90 and 100 mg/kg body wt for 14 consecutive days to male and female Wistar rats did not induce any short term toxicity. Collectively, these data demonstrate that the extract of the leaves of Aegle marmelos have a high margin of drug safety.<sup>(18)</sup>

**Parts used**<sup>(19)</sup>

Fruits (Both ripened and unripe) Root bark  
Leaves Rind of ripe fruit  
Flowers

**Action**

Ripe fruit is sweet, aromatic, cooling, and nutritive. When taken fresh it possesses laxative properties. Unripe fruit is astringent, digestive, stomachic and little constipative. Pulp is stimulant, antipyretic and antiscorbutic. Fresh juice is bitter and pungent.<sup>(20)</sup>

**Action and Rasa Panchaka**<sup>(21)</sup>

**Tender Fruit:**

Tikta Kashaya – Rasa  
Ushna – Virya  
Vatakaphahara  
Pittakara  
Grahi  
Ruksha  
Laghu  
Pachana  
Balya  
Improves Agni

**Ripen fruit:**

Madhura  
Guru

**Root:**

Vatahara

**Action and Uses in Unani**

Tonic- Heart, Brain and Stomach  
Astringent  
Haemostatic  
Dysentery  
Aphrodisiac

**Therapeutic uses**

Fruit is very valuable in habitual constipation, chronic dysentery and dyspepsia. It is one of the ingredients in Dashamul. It is used in diarrhea and dysentery of children where there is no fever. It is also given to prevent the growth of piles.

Decoction of root, root bark sometimes the stem bark is useful in intermittent fever, also in palpitation of heart. Leaves are made into a poultice and applied to inflamed parts.<sup>(22)</sup>

**Aims and Objective**

This study intends to study the efficacy of Bilvapatra Lepa Chikitsa in the management of unknown insect bite (Kitakadansha) vishaktata.

Recollect and arrange all the information scattered in different ancient text related to Lepa Chikitsa.

## **MATERIALS AND METHODS**

This study is based on literary review collected from classical Ayurveda texts and modern text books.

In this study following heads are included :

Definition of Visha  
Types of Visha  
Definition of Jangam Visha and their sites  
Signs and Symptoms of Vishaktata  
Formation of Lepa  
Application of Lepa  
Before application  
After application  
Discussion  
Conclusion

### **Visha**

The word Visha originated from two different words – Vishad means unhappiness and Vishvak means everywhere. A substance which produces vitiation of Dhaatu can be called as Visha.<sup>(23)</sup> As per Sushrut Samhita a substance producing despair is called as Visha.<sup>(24)</sup> Perhaps the most comprehensive definition of Visha is, any substance which enters the body from any route, vitiates bodily tissues, leads to deteriorate of health or life can be called as Visha.<sup>(25)</sup>

### **Types of Visha**

Poisons are generally classified into two types namely Stavara Visha (Vegetable origin) and Jangam Visha (Animal origin).<sup>(26)</sup>

### **Definition of Jangam Visha and Their Sites**

Poisons which are derived from Danshra (bite) are mobile, hence known as Jangam Visha (animate poison). Here also the term Danshra includes rest of fifteen adhisthans.

**As per Sushrut Samhita, there are sixteen sites of poison in the body of venomous animals.**<sup>(27)</sup>

- |           |           |                    |                   |
|-----------|-----------|--------------------|-------------------|
| 1. Sight  | 5. Urine  | 9. Menstrual Blood | 13. Bones         |
| 2. Breath | 6. Stool  | 10. Stings         | 14. Bile          |
| 3. Teeth  | 7. Semen  | 11. Flatus         | 15. Shuka (cilia) |
| 4. Nails  | 8. Saliva | 12. Anus           | 16. Dead body     |

### **Present signs and Symptoms of Vishaktata ( Unknown insect bite)**

Swelling                      Itching  
Redness                      Burning pain

### **Treatment**

Leaves are made into a poultice and applied to inflamed parts.<sup>(28)</sup>

### **Formation of Lepa**

Aegle Marmelos Leaves and Small amount of water taken and crushed in Khalabatta later it grinds in mixer.

### **Application of Lepa**

#### **Before Application**

Itching, Redness and Swelling present at bitten area.

#### **After Application**

While application of Bilvapatra Lepa over affected area, Itching instantly subsided. After 2 hours of application, Lepa become dry and removed; then swelling and redness also subsided.



**Before Application**



**Application of lepa**



**After Application**

## **DISCUSSION**

Swelling around bitten area is subsided because Charak classified the Bilva as Shothahar. Marmelosin is found in this plant, and marmelosin have antihistaminic property, so severe itching subsided instantaneously after local application of Bilvapatra Lepa . India is agricultural country.

Most of the population lives in rural area. Farmers do farming related business. Many times the incidence of insect biting happens. In such cases of insect biting, if Bilvapatra Lepa applied on the bitten part, local toxic symptoms are reduced or cured. Both the components in the above mixture are easily available and free of cost.

They are easy to use. If we use this, we can not only reduce the toxicity but also save some money. In rural and workers residence the possibility of insect biting is more compare to the city area. If this Lepa is applied at such places a person will get relief, also the expenditure on modern and costly medicine can be avoided.



## CONCLUSION

It is clear from this review that Aegle marmelos is very important medicinal plant and successfully used in Ayurveda, Unani, Siddha and other systems also. All parts of this plant such as bark, fruit, seed, stem and leaves are used for management of diseases. The present study validates the use of Leaves of Aegle marmelos in the treatment of unknown insect bite. The results obtained in this study suggest that the Bilvapatra Lepa can cure the toxicity by insect bite. The Lepa has significant discipline for further new area of investigations. A systemic research and development work should be undertaken for invention new medicine for better economic benefit and service of mankind.

## REFERENCES

- [1]. Kaviraj Dr. Ambikadattaahashtri, Sushrutsamhita; Chaukhambha Sanskrit Sansthan, Varanasi – 1, 2007; Kalpasthan 2 :15.
- [2]. Vijay B. Lambole, Phytopharmacological Properties of Aegle Marmelos as a Potential Medicinal Tree; International Journal of Pharmaceutical Sciences Review and Research, volume 5, Issue 2,2010-014.
- [3]. Dr. K M Nadkarni's Indian Materia Medica; Bombay Popular Prakashan; 1995: 45-49.
- [4]. [https://en.m.wikipedia.org/wiki/Aegle\\_marmelos](https://en.m.wikipedia.org/wiki/Aegle_marmelos)
- [5]. Vaidya Banavarilal Mishra, Dravyaguna Hastamalak; Sharana Book Depo 297 Galta Road, Jaipur-2006: 357-359.
- [6]. Vaidya Banavarilal Mishra, Dravyaguna Hastamalak; Sharana Book Depo 297 Galta Road, Jaipur-2006: 357-359.
- [7]. Bhavaprakasha
- [8]. Sanjaikanth E Vadakkethil Somanathan Pillai, Kiran Polimetla, Rajiv Avacharmal, Arun Pandiyan Perumal, "MENTAL HEALTH IN THE TECH INDUSTRY: INSIGHTS FROM SURVEYS AND NLP ANALYSIS". JOURNAL OF RECENT TRENDS IN COMPUTER SCIENCE AND ENGINEERING ( JRTCSE), vol. 10, no. 2, Sept. 2022, pp. 22-33, <https://doi.org/10.70589/JRTCSE.2022.2.3>.
- [9]. International Journal of Chemical Studies 2018; 6(3):2927-2931 Ankita S
- [10]. Riyanto S. Alkaloids from Aegle marmelos (Rutaceae). Mal J Ana Sci. 2001; 7:463-465.
- [11]. Bramhachari PV, Reddy YK, Phytochemical examination, Antioxident and radical scavenging activity of Aegle marmelos (L.) Correa extracts. JP harm Res.2010;3(12):3023-3025.
- [12]. Hema CG. Screening of pharmacological actions of Aegle marmelo. Ind J Pology.1999;20 80-85.
- [13]. Rinkesh
- [14]. Rinkesh Gajera. (2024). Comparative Analysis of Primavera P6 and Microsoft Project: Optimizing Schedule Management in Large-Scale Construction Projects. International Journal on Recent and Innovation Trends in Computing and Communication, 12(2), 961–972. Retrieved from <https://www.ijritcc.org/index.php/ijritcc/article/view/11164>
- [15]. Rinkesh Gajera , "Leveraging Procure for Improved Collaboration and Communication in Multi-Stakeholder Construction Projects", International Journal of Scientific Research in Civil Engineering (IJSRCE), ISSN : 2456-6667, Volume 3, Issue 3, pp.47-51, May-June.2019
- [16]. Raina, Palak, and Hitali Shah."Data-Intensive Computing on Grid Computing Environment." International Journal of Open Publication and Exploration (IJOPE), ISSN: 3006-2853, Volume 6, Issue 1, January-June, 2018.
- [17]. Hitali Shah."Millimeter-Wave Mobile Communication for 5G". International Journal of Transcontinental Discoveries, ISSN: 3006-628X, vol. 5, no. 1, July 2018, pp. 68-74, <https://internationaljournals.org/index.php/ijtd/article/view/102>.
- [18]. Rinkesh Gajera , "Integrating Power Bi with Project Control Systems: Enhancing Real-Time Cost Tracking and Visualization in Construction", International Journal of Scientific Research in Civil Engineering (IJSRCE), ISSN : 2456-6667, Volume 7, Issue 5, pp.154-160, September-October.2023
- [19]. URL : <https://ijsrce.com/IJSRCE123761>
- [20]. Rinkesh Gajera, "The Impact of Smartpm's Ai-Driven Analytics on Predicting and Mitigating Schedule Delays in Complex Infrastructure Projects", Int J Sci Res Sci Eng Technol, vol. 11, no. 5, pp. 116–122, Sep. 2024, Accessed: Oct. 02, 2024. [Online]. Available: <https://ijsrset.com/index.php/home/article/view/IJSRSET24115101>
- [21]. Rinkesh Gajera. (2024). IMPROVING RESOURCE ALLOCATION AND LEVELING IN CONSTRUCTION PROJECTS: A COMPARATIVE STUDY OF AUTOMATED TOOLS IN PRIMAVERA P6 AND MICROSOFT PROJECT. International Journal of Communication Networks and Information Security (IJCNIS), 14(3), 409–414. Retrieved from <https://ijcnis.org/index.php/ijcnis/article/view/7255>
- [22]. Shah, Hitali. "Ripple Routing Protocol (RPL) for routing in Internet of Things." International Journal of Research Radicals in Multidisciplinary Fields, ISSN: 2960-043X 1, no. 2 (2022): 105-111.

- [23]. Hitali Shah.(2017). Built-in Testing for Component-Based Software Development. *International Journal of New Media Studies: International Peer Reviewed Scholarly Indexed Journal*, 4(2), 104–107. Retrieved from <https://ijnms.com/index.php/ijnms/article/view/259>
- [24]. Gajera, R. (2024). Enhancing risk management in construction projects: Integrating Monte Carlo simulation with Primavera risk analysis and PowerBI dashboards. *Bulletin of Pure and Applied Sciences-Zoology*, 43B(2s).
- [25]. Gajera, R. (2024). The role of machine learning in enhancing cost estimation accuracy: A study using historical data from project control software. *Letters in High Energy Physics*, 2024, 495-500.
- [26]. Rinkesh Gajera. (2024). The Impact of Cloud-Based Project Control Systems on Remote Team Collaboration and Project Performance in the Post-Covid Era. *International Journal of Research and Review Techniques*, 3(2), 57–69. Retrieved from <https://ijrrt.com/index.php/ijrrt/article/view/204>
- [27]. Rinkesh Gajera, 2023. Developing a Hybrid Approach: Combining Traditional and Agile Project Management Methodologies in Construction Using Modern Software Tools, *ESP Journal of Engineering & Technology Advancements* 3(3): 78-83.
- [28]. Bharath Kumar Nagaraj, SivabalaselvamaniDhandapani, “Leveraging Natural Language Processing to Identify Relationships between Two Brain Regions such as Pre-Frontal Cortex and Posterior Cortex”, *Science Direct, Neuropsychologia*, 28, 2023.
- [29]. Paulraj, B. (2023). Enhancing Data Engineering Frameworks for Scalable Real-Time Marketing Solutions. *Integrated Journal for Research in Arts and Humanities*, 3(5), 309–315. <https://doi.org/10.55544/ijrah.3.5.34>
- [30]. Balachandar, P. (2020). Title of the article. *International Journal of Scientific Research in Science, Engineering and Technology*, 7(5), 401-410. <https://doi.org/10.32628/IJSRSET23103132>
- [31]. Balachandar Paulraj. (2024). LEVERAGING MACHINE LEARNING FOR IMPROVED SPAM DETECTION IN ONLINE NETWORKS. *Universal Research Reports*, 11(4), 258–273. <https://doi.org/10.36676/urr.v11.i4.1364>
- [32]. Paulraj, B. (2022). Building Resilient Data Ingestion Pipelines for Third-Party Vendor Data Integration. *Journal for Research in Applied Sciences and Biotechnology*, 1(1), 97–104. <https://doi.org/10.55544/jrasb.1.1.14>
- [33]. Paulraj, B. (2022). The Role of Data Engineering in Facilitating Ps5 Launch Success: A Case Study. *International Journal on Recent and Innovation Trends in Computing and Communication*, 10(11), 219–225. <https://doi.org/10.17762/ijritcc.v10i11.11145>
- [34]. Paulraj, B. (2019). Automating resource management in big data environments to reduce operational costs. *Tuijin Jishu/Journal of Propulsion Technology*, 40(1). <https://doi.org/10.52783/tjjpt.v40.i1.7905>
- [35]. Balachandar Paulraj. (2021). Implementing Feature and Metric Stores for Machine Learning Models in the Gaming Industry. *European Economic Letters (EEL)*, 11(1). Retrieved from <https://www.eelet.org.uk/index.php/journal/article/view/1924>
- [36]. Dipak Kumar Banerjee, Ashok Kumar, Kuldeep Sharma, *Artificial Intelligence on Additive Manufacturing*. (2024). *International IT Journal of Research*, ISSN: 3007-6706, 2(2), 186-189. <https://itjournal.org/index.php/itjournal/article/view/37>
- [37]. Balachandar Paulraj. (2024). SCALABLE ETL PIPELINES FOR TELECOM BILLING SYSTEMS: A COMPARATIVE STUDY. *Darpan International Research Analysis*, 12(3), 555–573. <https://doi.org/10.36676/dira.v12.i3.107>
- [38]. Ankur Mehra, Sachin Bhatt, Ashwini Shivarudra, Swethasri Kavuri, Balachandar Paulraj. (2024). Leveraging Machine Learning and Data Engineering for Enhanced Decision-Making in Enterprise Solutions. *International Journal of Communication Networks and Information Security (IJCNIS)*, 16(2), 135–150. Retrieved from <https://www.ijcnis.org/index.php/ijcnis/article/view/6989>
- [39]. Bhatt, S., Shivarudra, A., Kavuri, S., Mehra, A., & Paulraj, B. (2024). Building scalable and secure data ecosystems for multi-cloud architectures. *Letters in High Energy Physics*, 2024(212).
- [40]. Balachandar Paulraj. (2024). Innovative Strategies for Optimizing Operational Efficiency in Tech-Driven Organizations. *International Journal of Intelligent Systems and Applications in Engineering*, 12(20s), 962 –. Retrieved from <https://ijisae.org/index.php/IJISAE/article/view/6879>
- [41]. Bhatt, S. (2020). Leveraging AWS tools for high availability and disaster recovery in SAP applications. *International Journal of Scientific Research in Science, Engineering and Technology*, 7(2), 482. <https://doi.org/10.32628/IJSRSET2072122>
- [42]. Bhatt, S. (2023). A comprehensive guide to SAP data center migrations: Techniques and case studies. *International Journal of Scientific Research in Science, Engineering and Technology*, 10(6), 346. <https://doi.org/10.32628/IJSRSET2310630>



- [43]. Kavuri, S., & Narne, S. (2020). Implementing effective SLO monitoring in high-volume data processing systems. *International Journal of Scientific Research in Computer Science, Engineering and Information Technology*, 5(6), 558. <https://doi.org/10.32628/CSEIT206479>
- [44]. Kavuri, S., & Narne, S. (2023). Improving performance of data extracts using window-based refresh strategies. *International Journal of Scientific Research in Science, Engineering and Technology*, 10(6), 359. <https://doi.org/10.32628/IJSRSET2310631>
- [45]. Neha Yadav, Vivek Singh, "Probabilistic Modeling of Workload Patterns for Capacity Planning in Data Center Environments" (2022). *International Journal of Business Management and Visuals*, ISSN: 3006-2705, 5(1), 42-48. <https://ijbmv.com/index.php/home/article/view/73>
- [46]. Vivek Singh, Neha Yadav. (2023). Optimizing Resource Allocation in Containerized Environments with AI-driven Performance Engineering. *International Journal of Research Radicals in Multidisciplinary Fields*, ISSN: 2960-043X, 2(2), 58–69. Retrieved from <https://www.researchradicals.com/index.php/rr/article/view/83>
- [47]. Kavuri, S. (2024). Automation in distributed shared memory testing for multi-processor systems. *International Journal of Scientific Research in Science, Engineering and Technology*, 12(4), 508. <https://doi.org/10.32628/IJSRSET12411594>
- [48]. Swethasri Kavuri, "Integrating Kubernetes Autoscaling for Cost Efficiency in Cloud Services", *Int. J. Sci. Res. Comput. Sci. Eng. Inf. Technol.*, vol. 10, no. 5, pp. 480–502, Oct. 2024, doi: 10.32628/CSEIT241051038.
- [49]. Swethasri Kavuri. (2024). Leveraging Data Pipelines for Operational Insights in Enterprise Software. *International Journal of Intelligent Systems and Applications in Engineering*, 12(10s), 661–682. Retrieved from <https://ijisae.org/index.php/IJISAE/article/view/6981>
- [50]. Swethasri Kavuri, "Advanced Debugging Techniques for Multi-Processor Communication in 5G Systems", *International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT)*, ISSN : 2456-3307, Volume 9, Issue 5, pp.360-384, September-October-2023. Available at doi : <https://doi.org/10.32628/CSEIT239071>
- [51]. Mehra, A. (2023). Strategies for scaling EdTech startups in emerging markets. *International Journal of Communication Networks and Information Security*, 15(1), 259–274. <https://ijcnis.org>
- [52]. Mehra, A. (2021). The impact of public-private partnerships on global educational platforms. *Journal of Informatics Education and Research*, 1(3), 9–28. <http://jier.org>
- [53]. Ankur Mehra. (2019). Driving Growth in the Creator Economy through Strategic Content Partnerships. *International Journal for Research Publication and Seminar*, 10(2), 118–135. <https://doi.org/10.36676/jrps.v10.i2.1519>
- [54]. Mehra, A. (2023). Leveraging Data-Driven Insights to Enhance Market Share in the Media Industry. *Journal for Research in Applied Sciences and Biotechnology*, 2(3), 291–304. <https://doi.org/10.55544/jrasb.2.3.37>
- [55]. Kulkarni, Amol. "Natural Language Processing for Text Analytics in SAP HANA." *International Journal of Multidisciplinary Innovation and Research Methodology*, ISSN: 2960-2068 3.2 (2024): 135-144.
- [56]. Ankur Mehra. (2022). Effective Team Management Strategies in Global Organizations. *Universal Research Reports*, 9(4), 409–425. <https://doi.org/10.36676/urr.v9.i4.1363>
- [57]. Mehra, A. (2023). Innovation in brand collaborations for digital media platforms. *IJFANS International Journal of Food and Nutritional Sciences*, 12(6), 231. <https://doi.org/10.XXXX/xxxxx>
- [58]. Ankur Mehra. (2022). Effective Team Management Strategies in Global Organizations. *Universal Research Reports*, 9(4), 409–425. <https://doi.org/10.36676/urr.v9.i4.1363>
- [59]. Mehra, A. (2023). Leveraging Data-Driven Insights to Enhance Market Share in the Media Industry. *Journal for Research in Applied Sciences and Biotechnology*, 2(3), 291–304. <https://doi.org/10.55544/jrasb.2.3.37>
- [60]. Ankur Mehra. (2022). Effective Team Management Strategies in Global Organizations. *Universal Research Reports*, 9(4), 409–425. <https://doi.org/10.36676/urr.v9.i4.1363>
- [61]. Ankur Mehra. (2022). The Role of Strategic Alliances in the Growth of the Creator Economy. *European Economic Letters (EEL)*, 12(1). Retrieved from <https://www.eelet.org.uk/index.php/journal/article/view/1925>
- [62]. Kavuri, S., & Narne, S. (2020). Implementing effective SLO monitoring in high-volume data processing systems. *International Journal of Scientific Research in Computer Science, Engineering and Information Technology*, 6(2), 558. <http://ijsrseit.com>
- [63]. Kavuri, S., & Narne, S. (2021). Improving performance of data extracts using window-based refresh strategies. *International Journal of Scientific Research in Science, Engineering and Technology*, 8(5), 359-377. <https://doi.org/10.32628/IJSRSET>
- [64]. Narne, S. (2023). Predictive analytics in early disease detection: Applying deep learning to electronic health records. *African Journal of Biological Sciences*, 5(1), 70–101. <https://doi.org/10.48047/AFJBS.5.1.2023.7>

- [65]. Swethasri Kavuri. (2024). Leveraging Data Pipelines for Operational Insights in Enterprise Software. *International Journal of Intelligent Systems and Applications in Engineering*, 12(10s), 661–682. Retrieved from <https://ijisae.org/index.php/IJISAE/article/view/6981>
- [66]. Narne, S. (2024). The impact of telemedicine adoption on patient satisfaction in major hospital chains. *Bulletin of Pure and Applied Sciences-Zoology*, 43B(2s).
- [67]. Narne, S. (2022). AI-driven drug discovery: Accelerating the development of novel therapeutics. *International Journal on Recent and Innovation Trends in Computing and Communication*, 10(9), 196. <http://www.ijritcc.org>