

# Karnendu R Pattanaik

Visionary Engineering Leader | Distributed System Design | Cloud Native Architecture | AI On Storage Network & Infrastructure

A transformative engineering executive with over 23 years of trailblazing achievements in cloud-native architectures, object storage solutions, and mission-critical software delivery. Renowned for steering high-stakes initiatives with precision and agility, empowering teams to achieve excellence in secure, scalable, and resilient systems. A results-driven leader with a track record of igniting innovation, advancing cybersecurity, and engineering seamless end-to-end delivery for global, distributed teams.



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## Profile Highlight

- **Strategic Leadership with Global Impact**

Proven track record of orchestrating high-performance engineering teams across diverse geographies for leading tech organizations, including Dell, NetApp, and Brocade. Expert in synthesizing complex, multi-disciplinary projects with a sharp focus on operational excellence, product quality, and business alignment.

- **Cloud & Storage Visionary**

Architected and led cutting-edge solutions, including Dell's Object Offering Elastic Cloud Storage (ECS) and cloud-native architecture like ObjectScale, elevating storage performance and scalability for enterprise needs. Extensive experience in S3-compatible storage and hybrid cloud environments on AWS and Kubernetes, with focusing on cybersecurity delivering secure and highly efficient cloud-native solutions.

- **DevOps & Resilience Advocate**

Champion of DevOps, CI/CD, and SRE practices, with a deep commitment to operational resilience, automation, and quality. Successfully pioneered Agile transformations, enabling continuous delivery, enhanced service reliability, and rapid innovation across platforms.

- **Transformational Change Agent (Agile Transformation)**

A dynamic leader in Agile and DevOps transformation, implementing Scrum at Scale and SRE principles to optimize delivery speed, drive efficiency, and foster collaboration. Skilled in breaking down silos, boosting cross-functional synergy, and empowering teams to push boundaries.

- **Award-Winning Contributor & Thought Leader**

Honored with prestigious awards, including NetApp Performance Awards and Mindteck Best Project Manager Award. Trusted industry advisor and SNIA board member to drive the SNIA Certification and Education Initiative PAN India. Recognized for thought leadership with impactful technical publications and speaking engagements on enterprise storage, automation, and hyper-convergence.

- **Storage and Networking Expertise :**

- "Extensive experience with multi-tiered client/server solutions, cloud-native storage architectures, and emerging storage technologies, including SATA, SSD, iSCSI, NVMe, SAN, NAS, and object storage (OSD), supporting high-performing storage environments and large-scale enterprise needs."
- "Deep familiarity with networking protocols (TCP/IP, Ethernet) and VMware environments, optimizing deployment and management of storage and networking solutions for data center clients and high-availability systems."
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- **Agentic AI Solution**

Designed and developed a scalable Agentic AI architecture leveraging Large Language Models (LLMs), Retrieval-Augmented Generation (RAG), and agentic workflows to deliver grounded, context-aware intelligence for storage infrastructure, enabling automated insights, decision support, and operational efficiency at scale.

## Core Competencies

- Languages: Java, Python, C/C++
- Platforms & Tools: Kubernetes, Docker, Jenkins, AWS, Terraform, Redis, Kafka
- Automation & Monitoring: RESTful APIs, Grafana, AI-based log analysis, CI/CD Orchestration
- Frameworks: Agile, DevOps, Scrum at Scale, SRE methodology
- Protocol: DHCP, DNS, IPv6

## Education

- M.Tech in Computer System & Infrastructure from BITS Pilani in 2020
- BE in Electronics & Communication from Gulbarga University Karnataka in 1999

## Notable Accomplishments across the Career

- **Dynamic Release Anchor for Dual Products:** Spearheaded the successful, simultaneous release of two high-impact Object Storage products, ensuring streamlined delivery and seamless integration. Certified Scrum Lead & Product Owner, recognized for accelerating product readiness.
- **Transformative Agile Leader:** Orchestrated enterprise-wide Agile transformation, championing Scrum at Scale to elevate delivery speed and organizational agility. Known as an influential change agent in Agile adoption.
- **Mentoring and Coaching:** Mentoring and coaching a high-performing technical team. Designing a training format for the new joiners for ECS & Object scale and fostering a culture that encourages continuous learning and collaboration.
- **End-to-End Project Management Specialist:** Commanded the full project management lifecycle as a proactive client-partner, fostering strategic relationships and driving impactful results.
- **Distinguished Subject Matter Expert at Brocade Communication Systems:** Led early-stage build adaptation, rigorous lab testing, and field issue simulations, and managed Proof of Concept projects. Delivered hands-on client interaction to optimize solution effectiveness.
- **Visionary Team Builder in Quality Validation:** A foundational leader at PMC-Sierra ESD—established and scaled the India-based product validation team, delivering exceptional quality standards and fostering a robust team environment.
- **Efficiency and Productivity Catalyst:** Drove best practices that significantly boosted productivity and team effectiveness, setting new operational benchmarks for quality and performance.
- **Leader of the NetApp Lab at Mindteck:** Managed a world-class lab with over 50 NAS filers and disk shelves, creating a high-performance environment akin to a small data center and enhancing system reliability.

## Career Timeline

- 2025-Till Date- Mindteck Ltd- Storage Practice Head
- 2021-2024- Dell Technologies- Sr Engineering Manager
- 2012-2021- NetApp, Microchip, Komprise (Mindteck)
- 2002-2012 - Brocade, HP, PMC Sierra (Wipro)- Manager
- 2000-2002- Axes Technologies- Software Engineer

## Recipient of various awards & recognitions:

- Board Member of SNIA India (Since 2017)
- 2016- Mindteck Special Award for dedication and hard work Idea fest -2015 winner on "Private cloud" using open stack
- NetApp Performance Award (2013, 2014) for best project governance. Mindteck Best Project Manager Award for 2014.
- FIMC award for excellent work in replicating PDL lab in Bangalore for HP, USA.
- Titans award for excellent work done in acquiring new technology and building & ramping up the team for HP, USA.
- Thanks a Zillion award for the extended help to team Members in the Brocade Inc. project. FIMC award for excellent work done in FOS Project for Brocade Inc.
- Thanks a Zillion award for helping the team to succeed in execution for PMC Sierra Inc

## Technical Publications

- Speaker in SNIA SCD, India 2015 on "Effective QA Methodology for Enterprise Storage"
- Speaker in SNIA SCD, India 2016 on "Hyper Convergence-Putting it all together"
- Speaker in SNIA SCD, India 2021 on "Pravega Streaming Platform"

## Annexure Projects Detail

### Mindteck Ltd

Leading the Storage Engineering Practice and Agentic AI CoE with a charter to build, scale, and operationalize high-performance teams across cloud-native storage, distributed systems, backup/recovery, and AI-driven engineering acceleration. Drive practice strategy, capability development, and delivery for global product clients.

Built the Storage & AI CoE in Bangalore to scale talent in object storage, data protection, SRE, and cloud platforms. Mentor senior technologists, shape hiring strategy, and grow an engineering culture grounded in Agile, DevOps, reliability, and AI-enabled execution. Partner with Product, Cloud, SRE, and CI/CD leaders to align architecture decisions with business outcomes and long-term reliability goals.

#### AI + Storage Innovation:

- Designed the AI-Driven Cloud Storage Tiering Agent using ML-based access prediction to optimize hot/warm/cold placement (up to 30% cost reduction).
- Built the Autonomous Test Recommendation Engine analyzing defects, coverage gaps, and logs to boost coverage by 20–40%.
- Created an AI-based Failure Pattern Analyzer clustering logs, traces, and telemetry to accelerate RCA by 40–60%.
- Developed multi-agent workflows automating requirement parsing, testcase generation, defect clustering, and daily quality insights.
- Reduced leakage and shortened validation cycles across object and block storage platforms.

### Dell Technologies

- ECS (Elastic Cloud Storage) platform. ECS is a scalable, cloud-scale object storage platform designed to simplify storage management, lower costs, and enable data-driven innovation for cloud solution. ECS from Dell Technologies offers a robust and flexible object storage solution designed to meet the needs of modern enterprises for storing, managing, and accessing large volumes of data efficiently and cost-effectively. Contributed to the design, development, and maintenance of Object Storage solutions, utilizing programming languages such as Java, Python, and C++.
- Contributed to the AFA Platform and Drive Qualification of the NVMe Drives for Object Storage Solution.
- Change enabler during the Agile Transformation for forming different UoM (Unit Of Management)
- Collaborated with cross-functional teams to gather requirements, design system architectures, and implement software features.
- Conducted code reviews, performed unit testing, functional Testing and ensured adherence to coding standards and best practices.
- Release Anchor for Co-sync release of two products
- Participated in troubleshooting and debugging activities to identify and resolve software defects and performance issues.
- Certified Scrum Lead & Product Owner
- Object Scale from Dell Technologies is a modern, container-native storage solution designed to meet the evolving needs of cloud-native applications and Kubernetes environments.

### NetApp, Microchip, Komprise (Mindteck India Ltd.)

- Scalable Cloud feature as SaaS for a Multi-node cluster Storage (A Data Storage company)
  - Development of the scalable feature for a SaaS & Validation
- Certification Team (Microsemi, CoE team)
  - Handling Certification which does the RAID Controller Certification for Windows (WHQL), Citrix, VSAN, VMware ESXi 5.6.0 & 6.5, Azure OS
- SaaS Solution for Unstructured Data Management from Komprise Technologies
  - The solution gives User the facility to push the data to Secondary storage as specified by User yet can fetch data from Cloud/secondary data target as Primary on need
- NetApp Cloud Services (Interop of the NetApp Platform on various Cloud)
  - Cloud Volume Ontap
- NIC & Storage Automation, NetApp Filer Testing & Automation (NetApp Inc)
  - Responsible for qualifying the supported configurations of NIC cards on various NetApp NAS based platforms with ONTAP operating system.
- Connectors Testing (NetApp Inc.)
  - Traffic Testing for NFS, CIFS, iSCSI testing for various connectors in a clustered environment for Platforms

**Brocade, HP, PMC Sierra**

**(Wipro Technologies)**

- Raid Controller HBA Solution in DAS (PMC Sierra INC):
  - Founder member of the QA team of the project.
  - Responsible for end to end testing of the product. This includes requirement collection, Defining Test Strategy, Effort Estimations, Planning, Scheduling, Tracking, Risk Management, Client
- Switch Testing & Data Migration Testing in SAN environment (Brocade Communications Inc.)
  - Executed SAN (Storage Area Networking) domain for testing Fabric OS of Brocade Switches.
  - Worked on storage Virtualization solution for Data Centers like DMM, Recover Point.
  - Interacted with the end customer of the product and simulation of field issues in lab and testing the solution for the issue.
- Firmware Testing of MFP Products (HP Inc.)
  - Led a team of 10 members involved in testing of MFP products.
  - Wrote the test plan, test cases and technically guide the team for execution.
  - Successfully optimized test suite for multiple releases.
- HP-PDF (HP Inc.)
  - Directed team of 15 members involved in testing of firmware for HP product to ensure it handles PDF properly

**Axes Technologies , Alcatel Inc**

- Worked on many VoIP protocols in both simulator and real gateway with ABF Language
- Tested the MEGACO protocol using the controller simulator.