



Prodapt powering
global telecom

How AI/ML helps DSPs to improve day-to-day operational efficiency

Credits

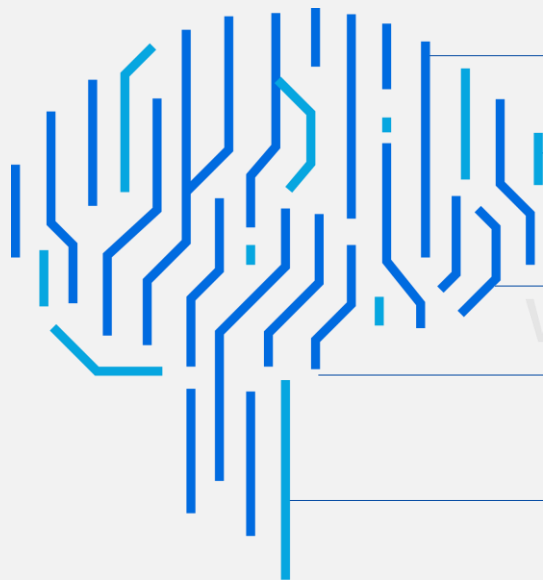
Avaiarasi S.

Velmurugan M.

Vishwa Nigam

Key drivers for AI/ML adoption in the DSP ecosystem

Complex landscape, impacted customer experience and huge amount of data



Need for a software-defined approach for operations and delivery of services (virtualization, self-healing and self-learning networks)

Need for intelligent automation of customer service (Chatbots, virtual assistants)

Need for predictive maintenance and agile operations (automated detection, trouble-shooting, and optimization of networks)

Need for innovation in subscriber profiling, usage analysis, and personalized offers

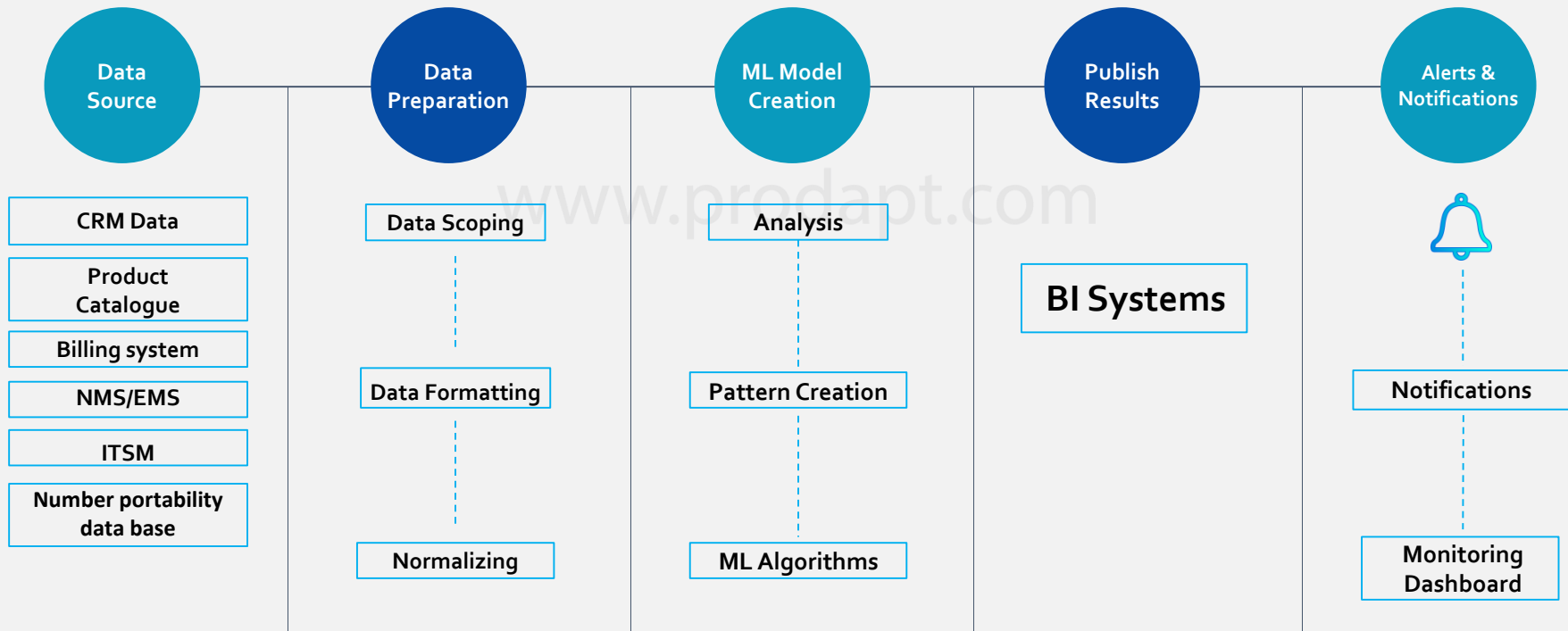
Need for processing huge amounts of data (historical and real-time) and generating actionable insights & predictions

In order to overcome challenges and improve operational efficiency, approximately 63.5% telecom companies are committing investments on AI systems to improve their infrastructure - IDC

This insight discusses on how artificial intelligence/ machine learning (AI/ML) use cases help DSPs to improve their day-to-day operations and also provide a list of suitable machine learning algorithms for those use cases.

How AI/ML can help DSPs on their day-to-day operations

AI/ML brings greater improvement in operational efficiency. It uses historical data for analysis and model building. These models consume real-time data and give proactive recommendations to avoid fall-out or service outage situations. AI/ML can help DSPs redesign their core functions such as customer service, service assurance and network automation.



AI/ML-based customer service use cases



Customer Churn Prediction

AI/ ML helps in predicting high propensity churners

- Major customer churn factors- billing dispute, competitor pricing, service quality and lack of customer service
- Churn prediction model enables operators to take preventive actions to retain their customers



Bot-assisted Customer Care

AI/ML-based bots to handle huge number of queries and issues

- AI powered Chatbots and virtual assistants can take large amount of customer care queries and support requests
- AI powered RPA bot can further help in handling processes, operational support, trouble tickets resolution.



Reaching right target customers

Effective product creation (plans & pricing)

- Creating an effective product portfolio based on behavioural analysis, demographic profiling, customer usage pattern and target market analysis
- Design targeted promotion and next best offers

Recommended ML algorithms

- Random forest
- Neural network

- Natural language processing
- Speech recognition
- Decision tree

- Unsupervised machine learning
- Cluster machine learning



Predictive Maintenance of Devices

Minimizing device/hardware failure by predicting future needs of maintenance

- Analyze device run-time, cycles and performance data
- Predict the need of maintenance and replacement in future to avoid issues and fall-outs



Network event prediction

Proactive monitoring of network to prevent future events

- Analyze past fall-out scenarios such as **nature of event, cause of event, and impact**
- Take preventive actions to avoid service interruptions



Network automation

Network capacity planning/ optimization

- Automated resource management- AI powered traffic characteristic analysis
- AI-driven self-aware assets- self provisioning, self optimized, self-healing network

Recommended ML algorithms

- Gradient boosting
- Random forest

- Gradient boosting
- Support vector machine (SVM)

- Decision tree
- Cluster machine learning

Benefits of AI/ ML in Telecom

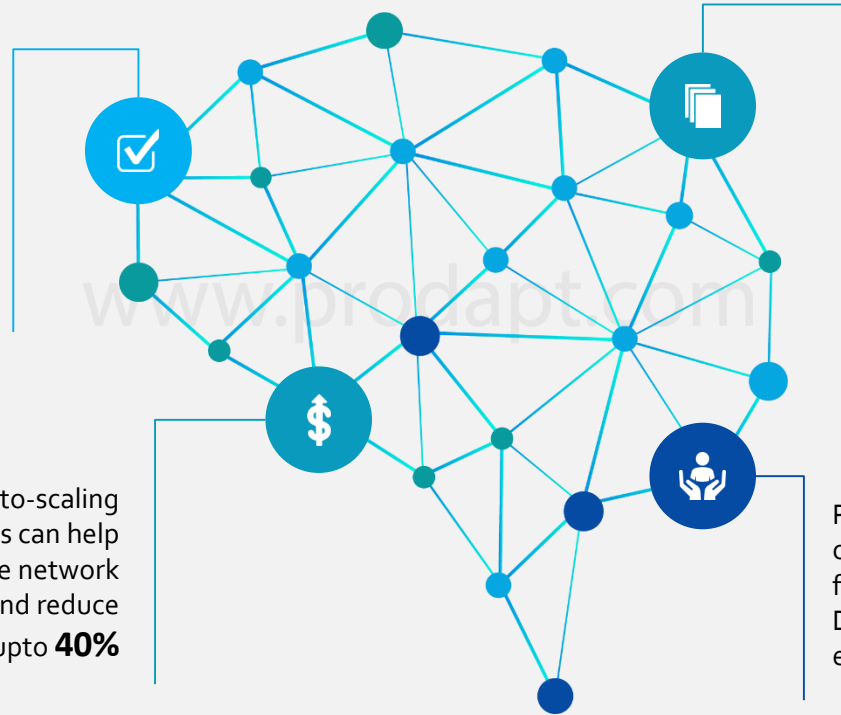


AI/ ML based solution helps DSPs categorize genuine and flapping events, thus reducing resource wastage by **50%** and service loss by **10%**

Machine learning-based churn prediction solution helps to reduce attrition rate by **5%**

ML based auto-scaling algorithms can help optimize the network capacity and reduce costs by upto **40%**

Proactive identification of customer issues and future fall-outs help DSPs improve customer experience



Contact Us

USA

Prodapt North America
Tualatin: 7565 SW Mohawk St.,
Phone: +1 503 636 3737

Dallas: 222 W. Las Colinas Blvd., Irving
Phone: +1 972 201 9009

New York: 1 Bridge Street, Irvington
Phone: +1 646 403 8158

CANADA

Prodapt Canada Inc.
Vancouver: 777, Hornby Street,
Suite 600, BC V6Z 1S4

UK

Prodapt (UK) Limited
Reading: Davidson House,
The Forbury, RG1 3EU
Phone: +44 (0) 11 8900 1068

EUROPE

Prodapt Solutions Europe
Amsterdam: Zekeringstraat 17A, 1014 BM
Phone: +31 (0) 20 4895711

Prodapt Consulting BV
Rijswijk: De Bruyn Kopsstraat 14
Phone: +31 (0) 70 4140722

Prodapt Germany GmbH
Aschheim: Sonnenstraße 31, 85609
Germany

SOUTH AFRICA

Prodapt SA (Pty) Ltd.
Johannesburg: No. 3,
3rd Avenue, Rivonia
Phone: +27 (0) 11 259 4000

INDIA

Prodapt Solutions Pvt. Ltd.
Chennai: Prince Infocity II, OMR
Phone: +91 44 4903 3000

“Chennai One” SEZ, Thoraipakkam
Phone: +91 44 4230 2300

Bangalore: “CareerNet Campus”
2nd floor, No. 53, Devarabisana Halli,
Phone: +91 44 4903 3000

THANK YOU!