

OUR FUTURE WITH TECHNOLOGY



**COVERED
TODAY**

A BRIEF OUTLINE

What is DevOps?

What is Data Engineering?

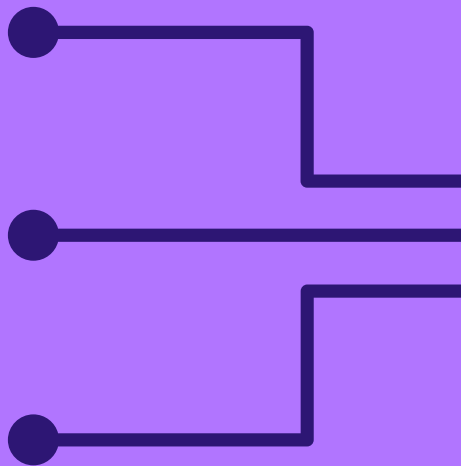
What is Cloud?

What is Opensource Tools?

What is System Integration?

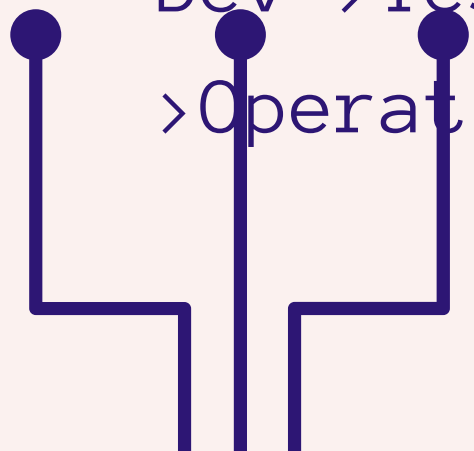
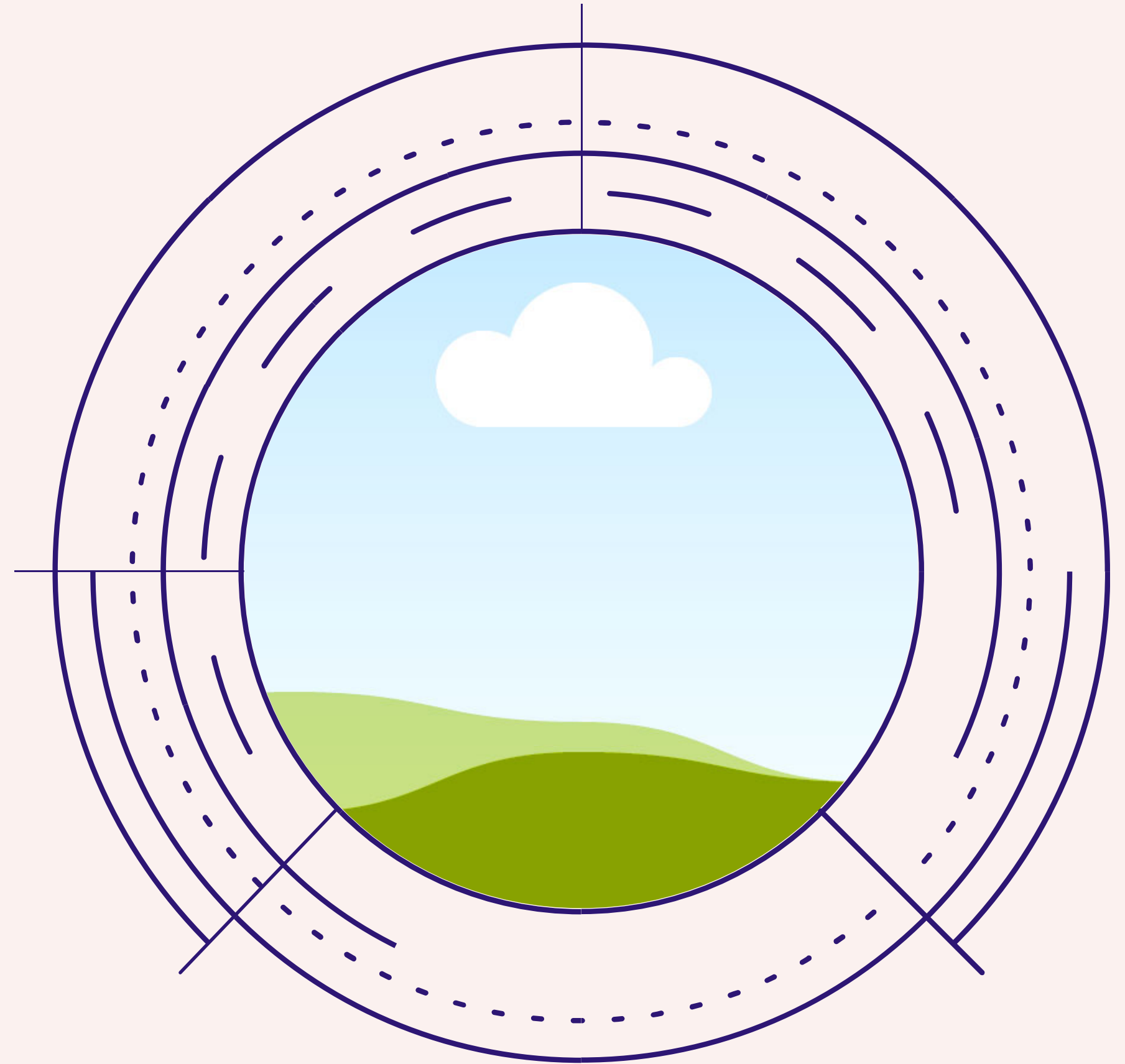
What is Machine Learning & AI?

Enterprise Use Case?



WHERE WE ARE TODAY

- In Today's era things are moving more toward automation.
- Data is showing character as velocity, veracity and volumes.
- Machines are replacing monotonous works.
- Development life cycle is more on milestone rather than finished product at a time.
- CI-CD is continuous activity,
Dev→Testing→Deployment→
Operation.





splunk®



INTRODUCTION TO DEVOPS

- DEFINE DEVOPS
- WHAT IS DEVOPS
- SDLC MODELS, LEAN, ITIL, AGILE
- WHY DEVOPS?
- HISTORY OF DEVOPS
- DEVOPS STAKEHOLDERS
- DEVOPS GOALS
- IMPORTANT TERMINOLOGY
- DEVOPS PERSPECTIVE
- DEVOPS AND AGILE
- DEVOPS TOOLS
- CONFIGURATION MANAGEMENT
- CONTINUOUS INTEGRATION AND DEPLOYMENT

INTRODUCTION TO CLOUD COMPUTING

- WHAT IS CLOUD COMPUTING
- HOW CLOUD COMPUTING ARE HELPFUL
- CLOUD'S ROLE IN DEVOPS ORCHESTRATION
- WHAT IS AWS
- USE CASES IN AWS
- COMPANIES USING AWS AND MARKET TENDS
- DIFFERENT SERVICES OFFERED IN AWS
- USE CASE: – HIGHLY AVAILABLE FAULT TOLERANT SYSTEMS
- UNDERSTANDING AVAILABILITY ZONE
- REGION
- CREATING YOUR OWN ACCOUNT IN AWS
- CREATING A VPC
- SUBNET
- NETWORK GETS WAY
- RUNNING YOUR OWN EC2 INSTANCE
- CONNECTING IN EC2 AND INSTALLING HTTPS IN EC2
- S3
- OVER VIEWS3
- SNS, CLOUD WATCH

INTRODUCTION TO VIRTUALIZATION

- WHAT IS VIRTUALIZATION?
- HISTORY OF VIRTUALIZATION
- WHAT IS HYPERVISOR?
- TYPES OF SERVER VIRTUALIZATION
- BENEFITS OF VIRTUALIZATION
- IMPORTANT VIRTUALIZATION PRODUCTS

VAGRANT INTRODUCTION

- WHY AND WHAT IS VAGRANT
- USES OF VAGRANT IN AN ENVIRONMENT
- ALTERNATIVES OF VAGRANT
- VAGRANT VERSIONS
- INSTALLATION AND CONFIGURATION
- INSTALLING VIRTUAL BOX
- HOW TO INSTALL VAGRANT ON WINDOWS
- CONFIGURING VAGRANT
- PROVISIONING WITH VAGRANT
- CREATING FIRST VM WITH VAGRANT
- OPERATIONS ON THE VM
- CONNECTING TO THE VM
- ADD REQUIRED IMAGES TO VAGRANT
- USING VAGRANT.

GIT: VERSION CONTROL INTRODUCTION

- VERSION CONTROL SYSTEMS
- LOCAL, CENTRALIZED AND DISTRIBUTED
- INSTALLING GIT
- INSTALLING ON LINUX
- INSTALLING ON WINDOWS
- INITIAL SETUP
- GIT ESSENTIALS
- CREATING REPOSITORY
- CLONING, CHECK-IN AND COMMITTING
- FETCH PULL AND REMOTE
- BRANCHING

INTRODUCTION TO ANSIBLE

- ANSIBLE ARCHITECTURE
- ANSIBLE COMMANDS
- ANSIBLE NODES
- ANSIBLE PLAYBOOK
- ANSIBLE ROLES
- ANSIBLE MODULES
- ANSIBLE TEMPLATES
- ANSIBLE GALAXY

Canva

INTRODUCTION TO DATA ENGINEERING

- WHAT IS DATA ENGINEERING
- HOW TO COLLECT THE DATA
- HOW TO PARSE THE DATA
- HOW TO ENRICH THE DATA
- HOW TO STORE THE DATA
- WHAT IS DATA BUS
- WHAT IS ZOOKEEPER
- WHAT IS BROKER
- WHAT IS DAHBOARD
- HOW TO IMPLEMENT KAFKA IN CLUSTER
- WHAT IS SQOOP
- HOW TO APPLY SECURITY AND ENCRYPTION
ACROSS DATA TRANSMISSION.

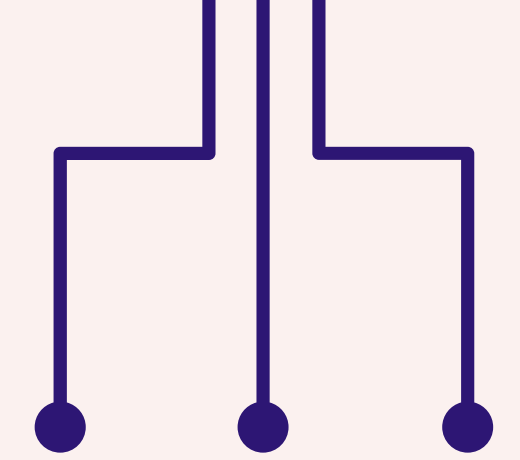
INTRODUCTION TO TOOLS

- INTRODUCTION TO ELK
- INTERODUCTION TO BEATS
- IMPLEMENTAION OF ELK AND BEATS
- INTRODUCTION TO PROMETHHEUS
- INTRODUCTION OF NODE EXPORTER
- IMPLEMENTAION OF PROMETHEUS
- IMPLEMENTAION OF DASHBOARD TOOLD LIKE
GRAFANA AND KIBANA

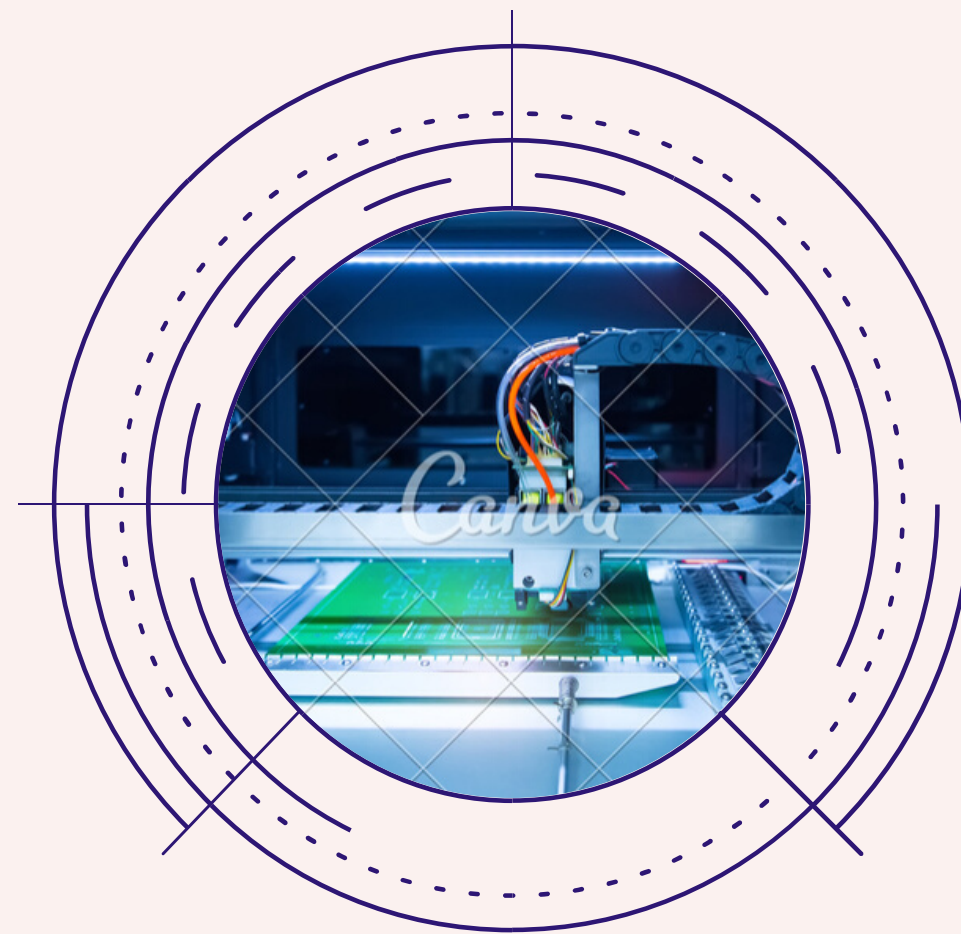
INTRODUCTION TO SPLUNK

- WHAT IS SPLUNK
- DEPLOYMENT OF SPLUNK IN CUSTER ENVIRONMENT
- INJECTION OF DATA FROM VARIOUS MECHANISM.
- DASHBOARD DEPLOYMENT
- SPLUNK SCALEUP AND SCALE DOWN IN ZERO DOWNTIME
- SPLUNK INTEGRATION WITH KAFKA.
- MANAGEMENT OF SPLUNK VIA CLI

Creation of Technology



PLANNING



PRODUCTION



IMPLEMENTATION

01



02

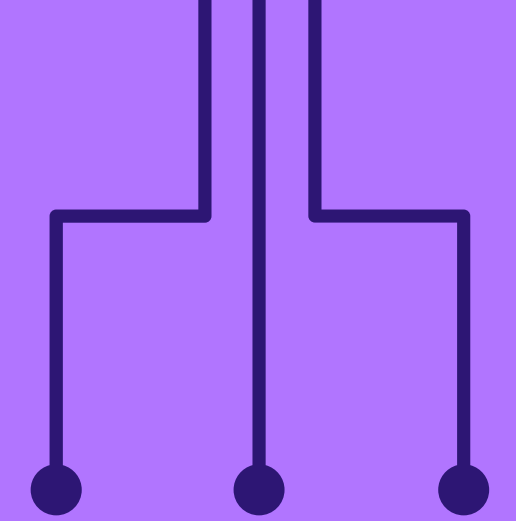


01 PRE-DIGITAL

Less scope of
Automation

02 POST-DIGITAL

Data Integration and
Analytics..



2ND MILLENNIUM
(BC)

1ST MILLENNIUM
(AD)

3RD MILLENNIUM
(AD)



1ST MILLENNIUM
(BC)

2ND MILLENNIUM
(AD)



RECENT DEVELOPMENTS

BATCH PROCESSING TO REAL TIME

Best Example is Your money transfer mechanism in real time with IMPS.

SYSTEM INTEGRATION

Integration of all banks with PayPhone/BHIM/Paytm

DATA ANALYTICS

Your AOI will be reflected on every Web Page





VIRTUAL ASSISTANTS

Implemetaion of
Bots

CASHLESS PAYMENTS

Implemenation
of Kafka and
apache spark

CLOUD COMPUTING

Exponential
reduction on
Opex and
increase in
efficiency

M2M/IOT

Data
Engineering and
Analytics



TYPES OF TECHNOLOGY



Communication



Transportation

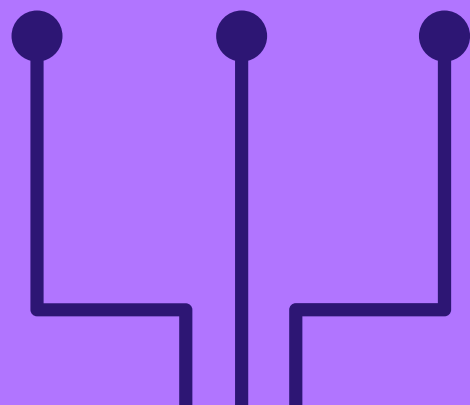


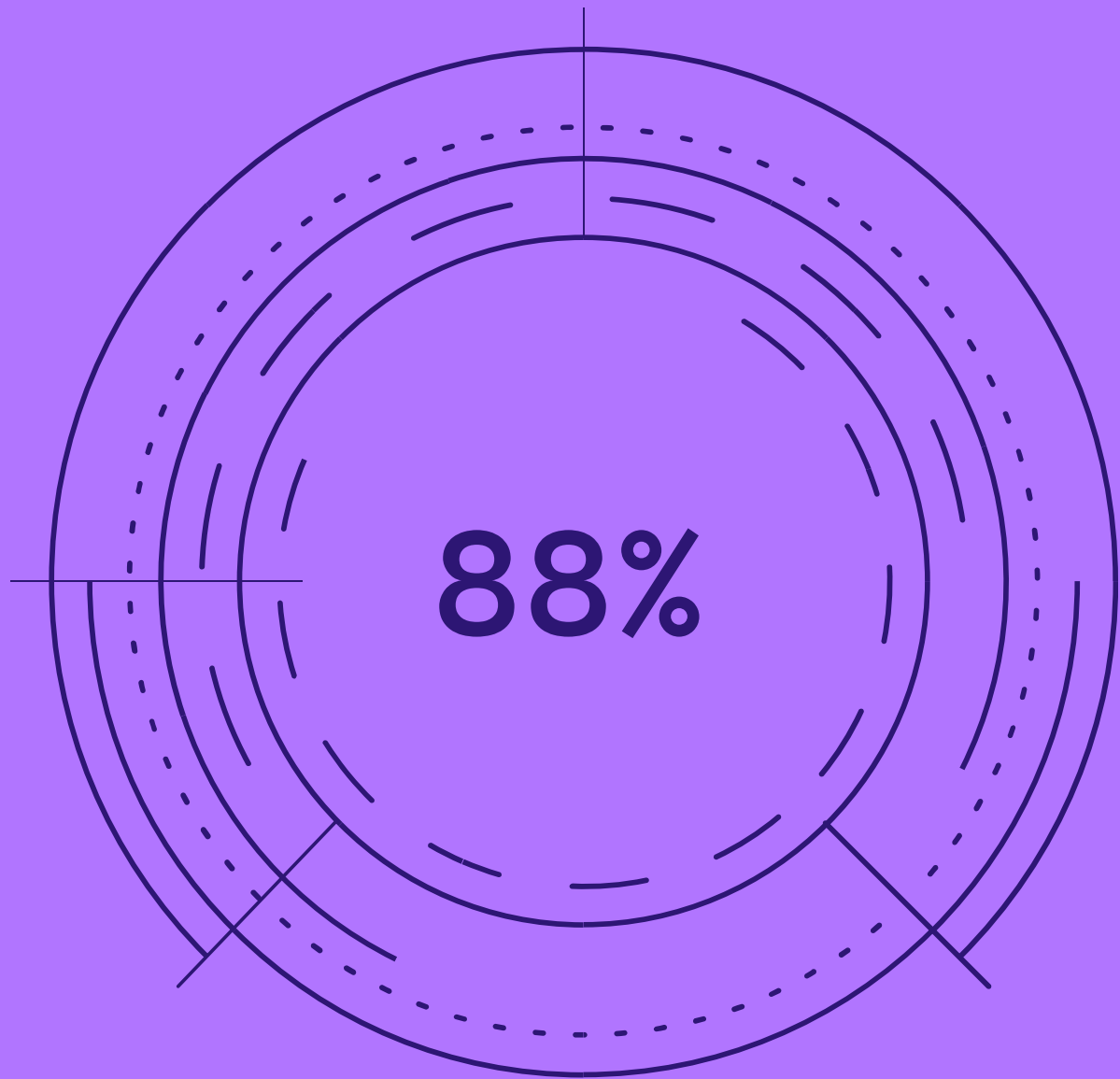
Biological

RELATIONSHIP
WITH
TECHNOLOGY

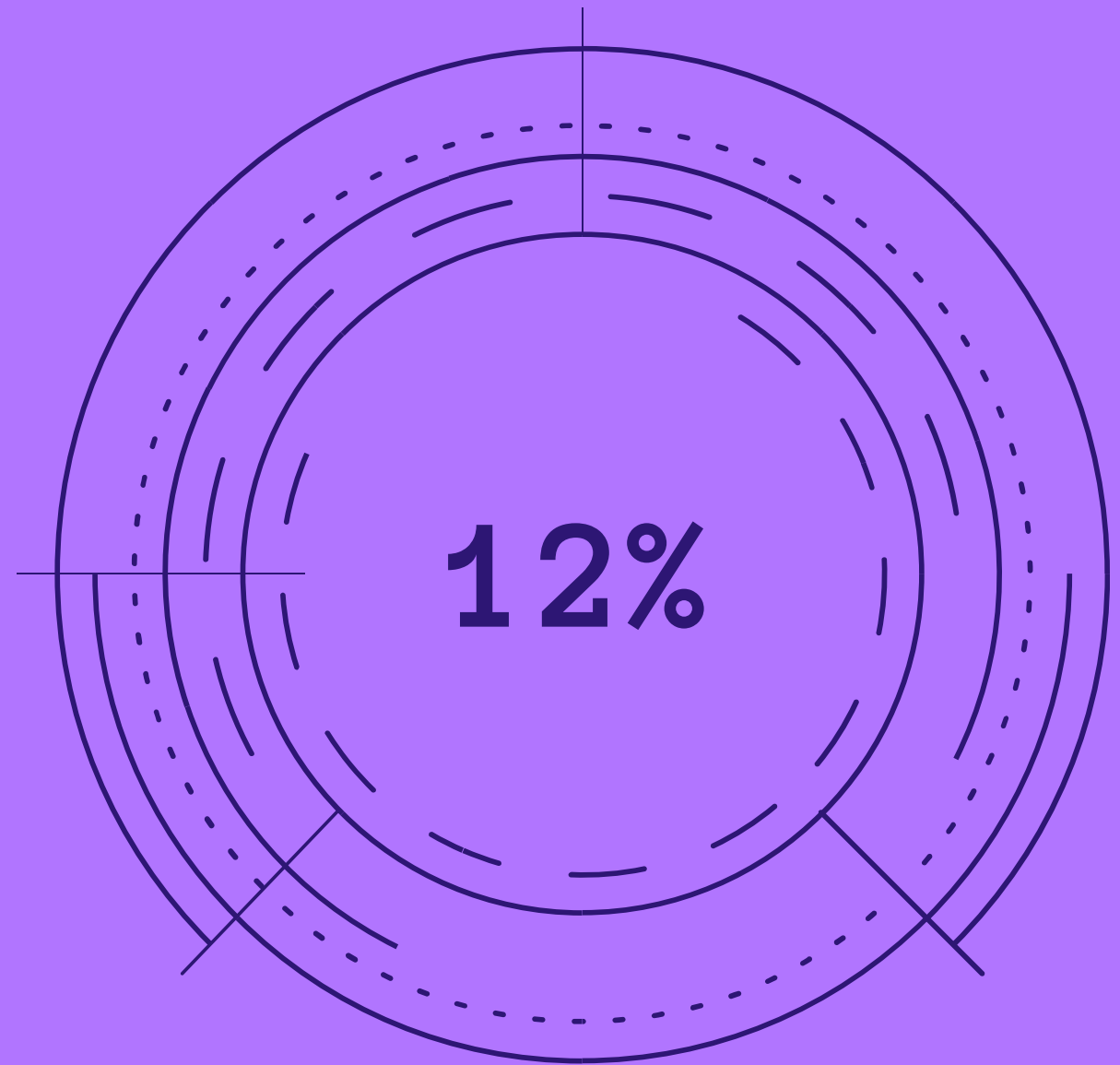
94% OF
STUDENTS

USE THEIR SMARTPHONES EVERY HOUR

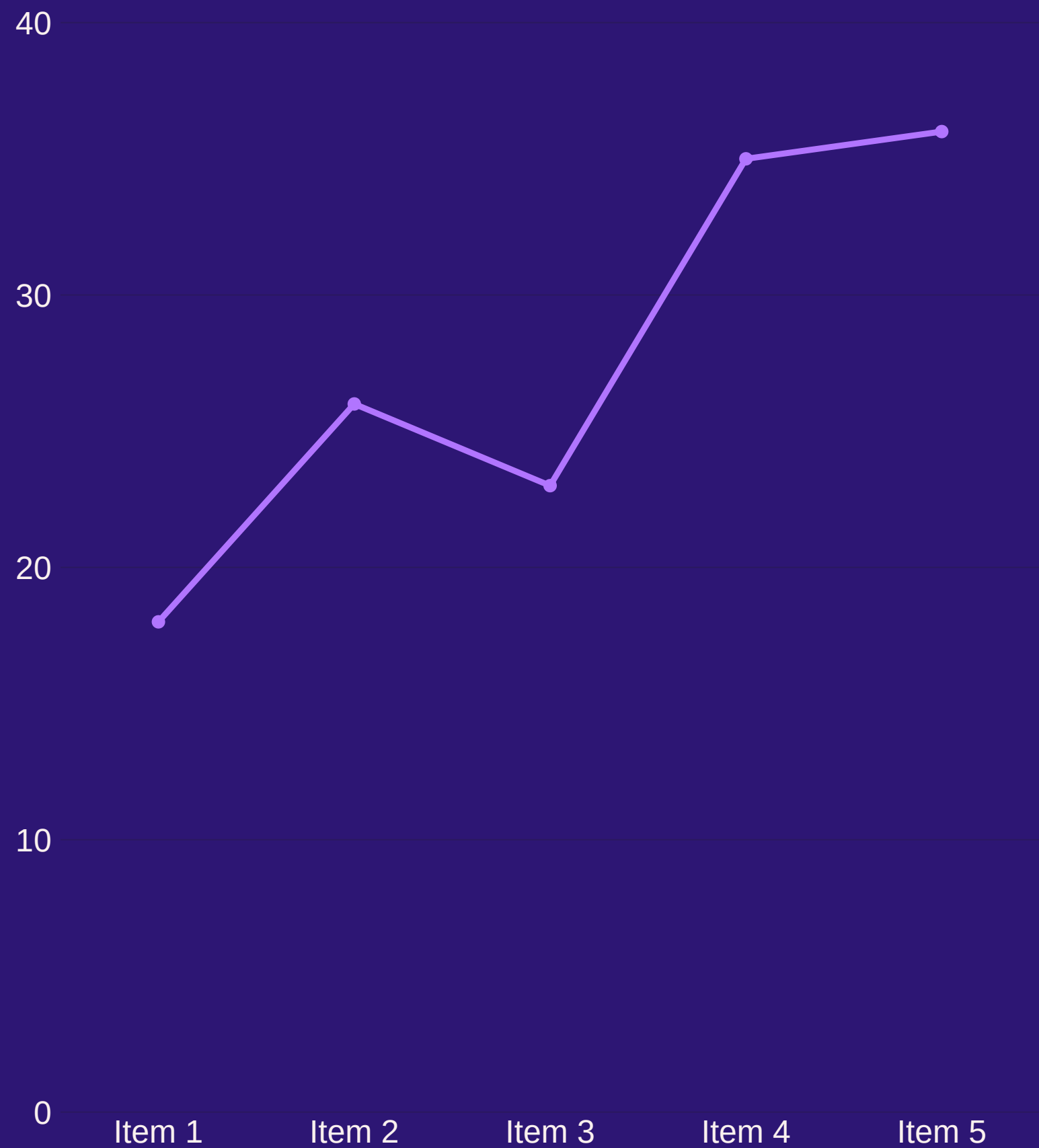




CAN'T GO A DAY WITHOUT
BEING ONLINE

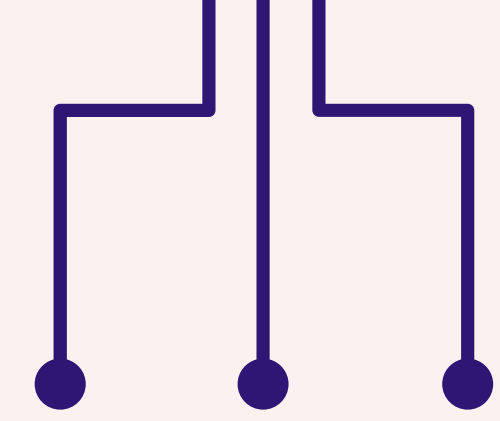


CAN GO A DAY WITHOUT
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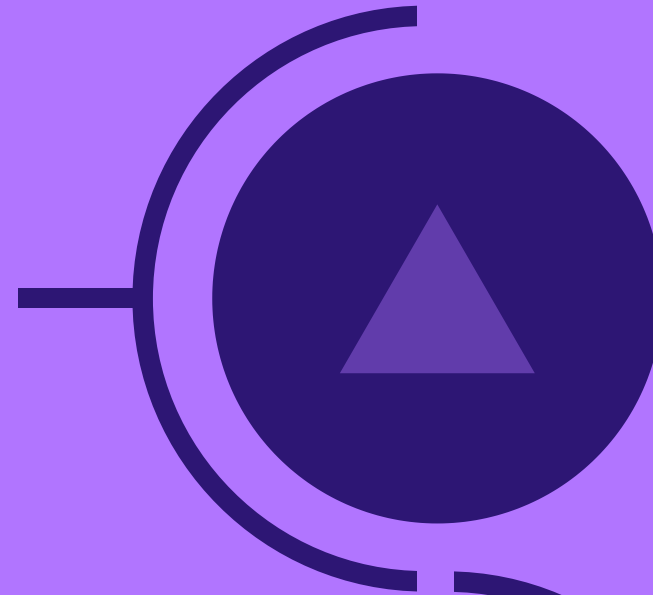


BY AGE GROUP

Analysis by ELK and SPLUNK .



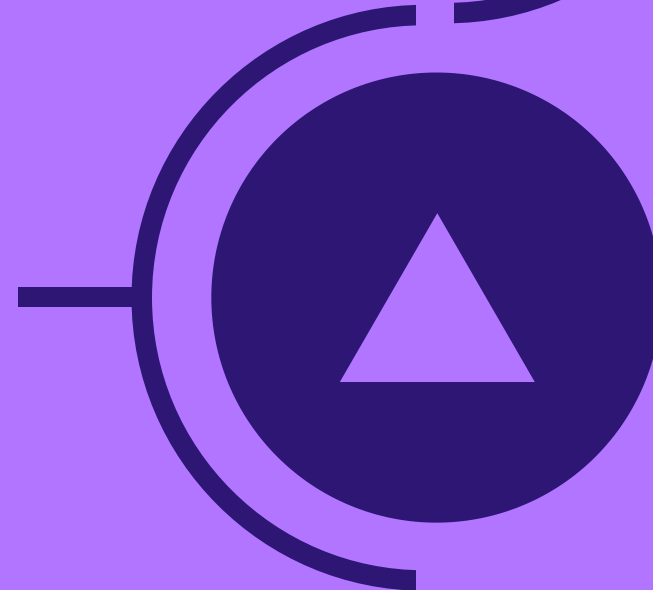
GLOBAL USE

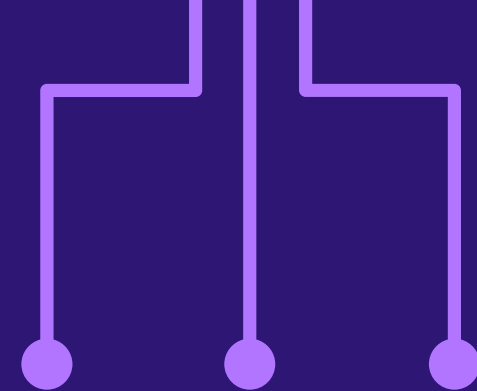
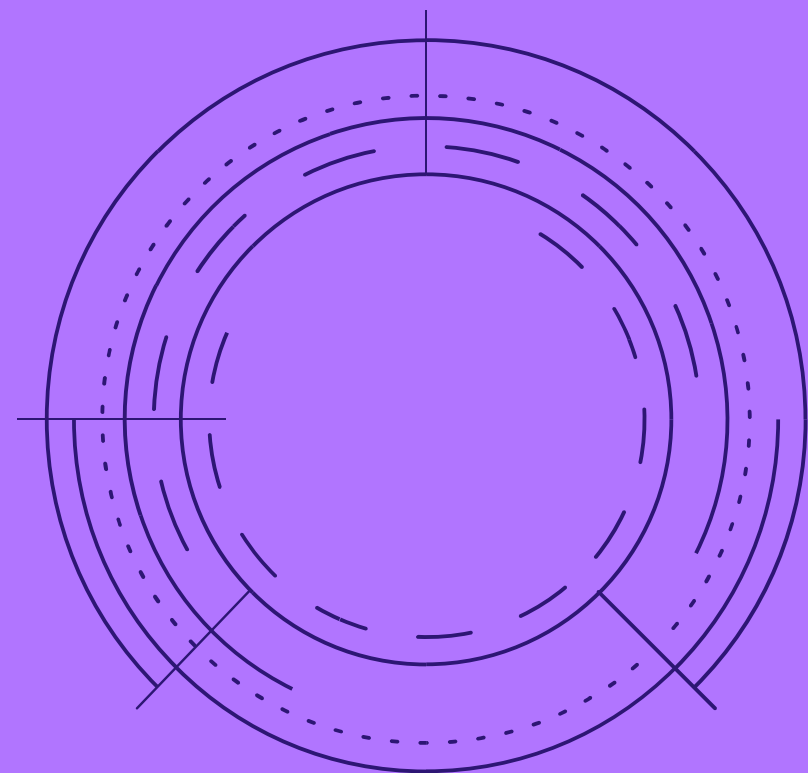


COMMUNITY USE



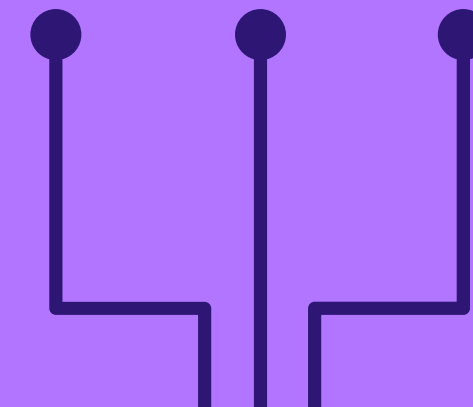
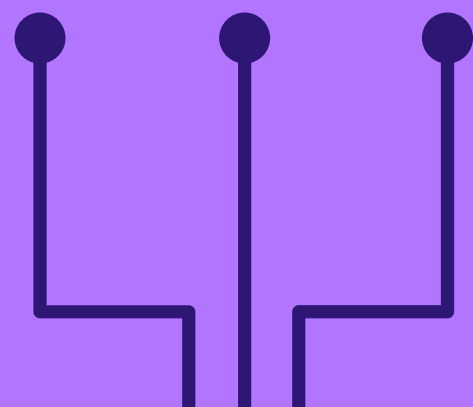
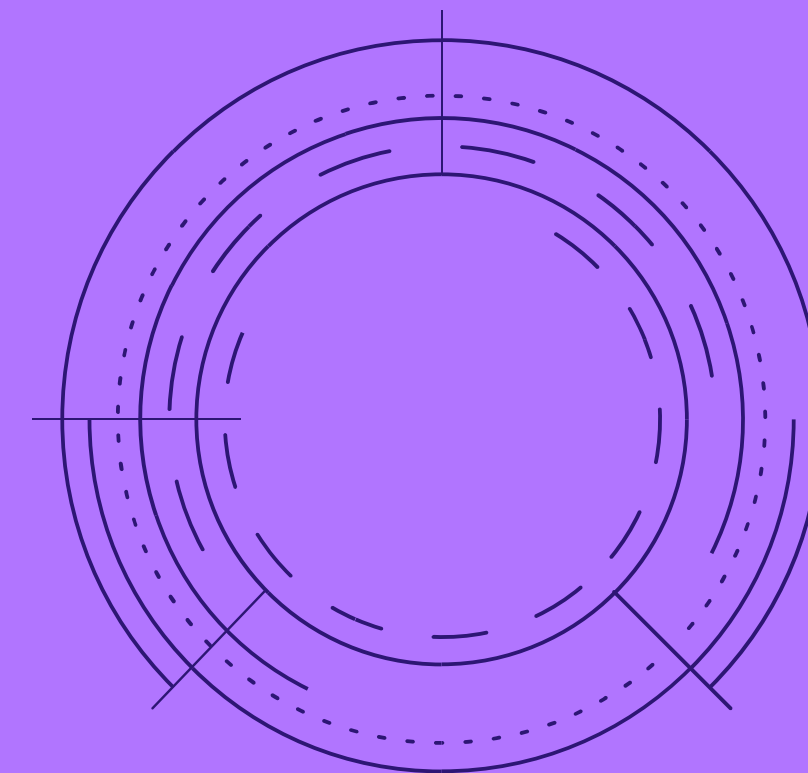
PERSONAL USE





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BE INSPIRED



Imagination is more
important than
knowledge.

ALBERT EINSTEIN