"Smart Machines: AI PCs and the Next Wave of Innovation

| GANESH

AI PCS: THE NEW FRONTIER OF PERSONAL COMPUTING

ARTIFICIAL INTELLIGENCE (AI) HAS RAPIDLY INFILTRATED VARIOUS ASPECTS OF OUR LIVES, AND NOW IT'S MAKING A SIGNIFICANT IMPACT ON PERSONAL COMPUTING. THE ADVENT OF AI-POWERED PCS IS NOT JUST AN INCREMENTAL STEP; IT'S A PARADIGM SHIFT. AS OF MID-2024, AI PCS HAVE STARTED TO CARVE OUT A SUBSTANTIAL NICHE IN THE MARKET, REPRESENTING 14% OF GLOBAL PC SHIPMENTS IN THE SECOND QUARTER (Q2). THIS ISN'T JUST A NUMBER—IT SIGNIFIES THE BEGINNING OF A NEW ERA WHERE OUR COMPUTERS AREN'T JUST TOOLS BUT INTELLIGENT PARTNERS IN OUR DAILY TASKS.

GLOBAL PC SHIPMENTS (Q2 2024):
AI PCS ACCOUNTED FOR 14% OF TOTAL GLOBAL SHIPMENTS.

IN ABSOLUTE TERMS, THIS TRANSLATES TO APPROXIMATELY 21.4 MILLION UNITS OUT OF THE 153 MILLION PCS SHIPPED GLOBALLY IN Q2 2024.

GROWTH COMPARISON:
IN Q2 2023, AI PCS REPRESENTED JUST 7% OF GLOBAL SHIPMENTS, SHOWING A 100% INCREASE YEAR-OVER-YEAR.

THE OVERALL PC MARKET GREW BY 5% DURING THE SAME PERIOD, INDICATING THAT AI PCS ARE GROWING AT A SIGNIFICANTLY FASTER RATE.
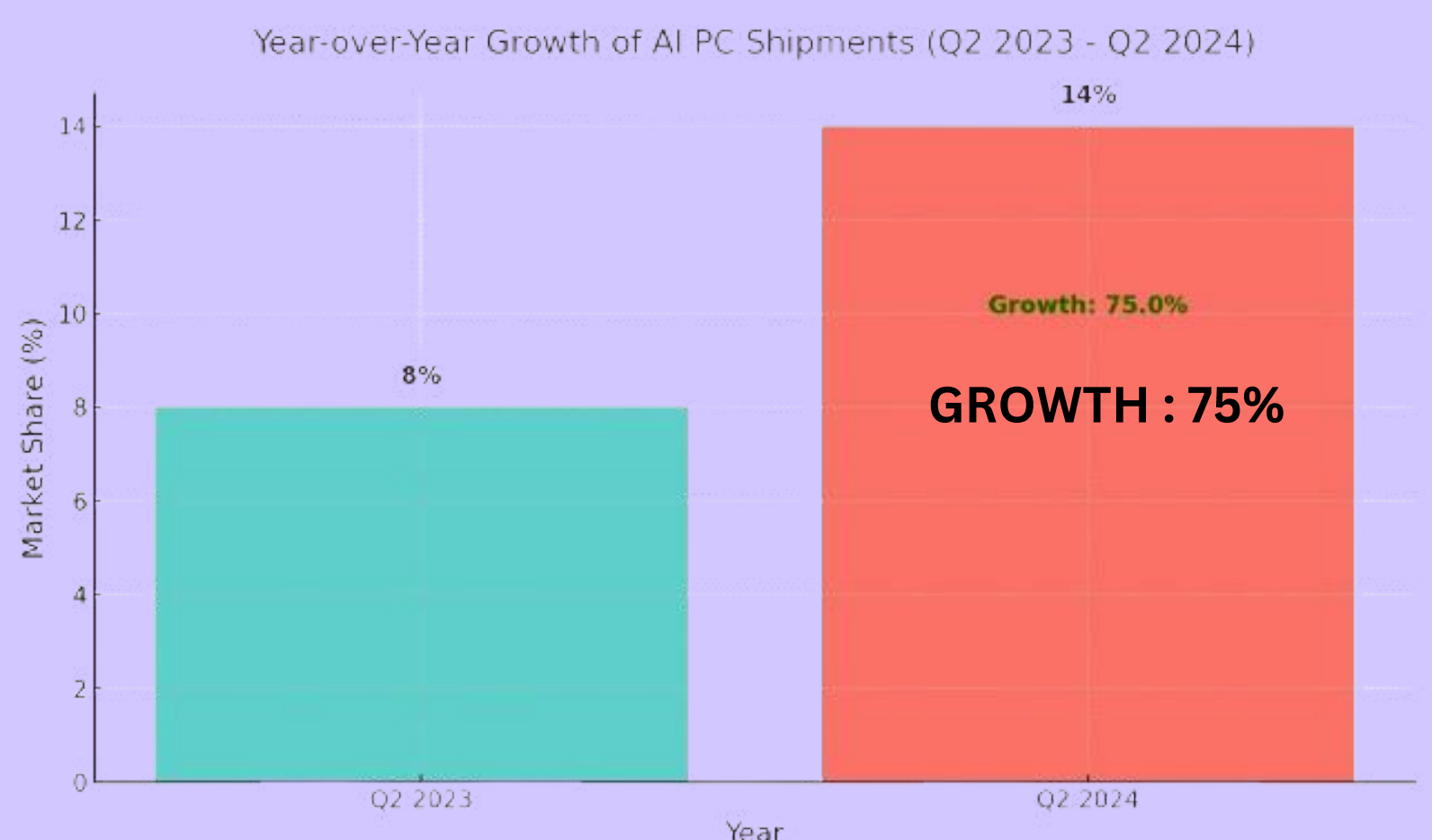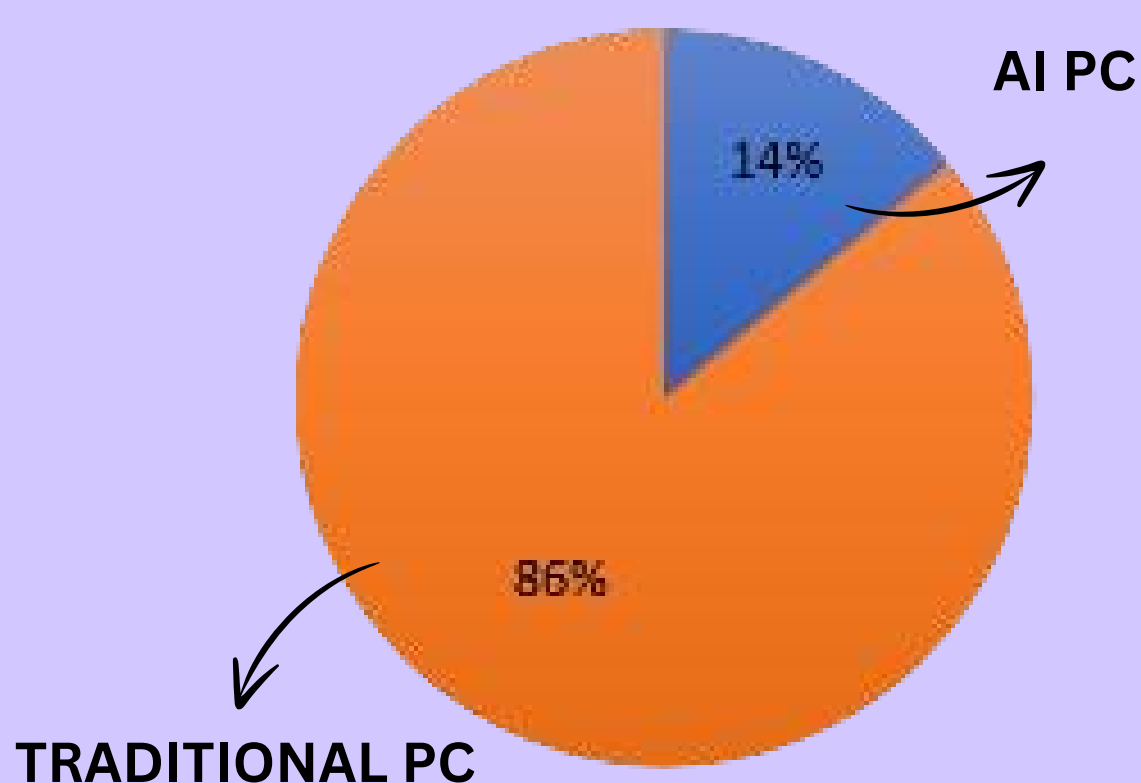
MARKET DYNAMICS:

CONSUMER DEMAND:
- INCREASED DEMAND FOR AI CAPABILITIES IN PERSONAL DEVICES, DRIVEN BY THE RISE OF REMOTE WORK, ONLINE EDUCATION, AND DIGITAL ENTERTAINMENT, HAS CONTRIBUTED TO THE GROWTH OF AI PCS.
- SURVEYS INDICATE THAT 65% OF CONSUMERS ARE INTERESTED IN AI FEATURES LIKE VOICE RECOGNITION, PREDICTIVE TEXT, AND ENHANCED SECURITY, MAKING THESE FEATURES KEY SELLING POINTS.

TECHNOLOGICAL ADVANCEMENTS:
- AI-SPECIFIC HARDWARE ADVANCEMENTS, SUCH AS NEURAL PROCESSING UNITS (NPUS) IN CPUS, ARE MAKING IT FEASIBLE TO INTEGRATE AI CAPABILITIES DIRECTLY INTO CONSUMER-GRADE PCS.
- THIS HARDWARE LEAP HAS RESULTED IN BETTER PERFORMANCE FOR AI-RELATED TASKS, MAKING AI PCS A MORE ATTRACTIVE OPTION FOR BOTH INDIVIDUAL AND CORPORATE USERS.

AI PC

14%

86%

TRADITIONAL PC

Year-over-Year Growth of AI PC Shipments (Q2 2023 - Q2 2024)

14%

Market Share (%)

8%

Growth: 75.0%

GROWTH : 75%

Q2 2023

Q2 2024

Year

THE RISE OF AI PCS: WHAT THE FUTURE HOLDS

ACCORDING TO INDUSTRY FORECASTS, AI-CAPABLE PCS ARE EXPECTED TO DOMINATE THE PERSONAL COMPUTING MARKET BY 2027, ACCOUNTING FOR APPROXIMATELY 60% OF ALL GLOBAL PC SHIPMENTS. THIS SIGNIFICANT INCREASE FROM 14% IN 2024 INDICATES A STRONG SHIFT IN CONSUMER AND BUSINESS PREFERENCES TOWARDS AI-ENHANCED DEVICES.

FACTORS DRIVING GROWTH

INCREASED AI CAPABILITIES:

THE EVOLUTION OF AI-SPECIFIC PROCESSORS, SUCH AS INTEL'S CORE ULTRA SERIES AND AMD'S RYZEN 8000G, IS ENABLING PCS TO HANDLE MORE COMPLEX AI TASKS, MAKING THEM MORE APPEALING TO BOTH CONSUMERS AND ENTERPRISES.

DEMAND FOR SMARTER DEVICES:

AS AI BECOMES MORE EMBEDDED IN DAILY LIFE, FROM VIRTUAL ASSISTANTS TO PREDICTIVE ANALYTICS, THE DEMAND FOR AI-CAPABLE PCS IS RISING. CONSUMERS ARE LOOKING FOR DEVICES THAT CAN ADAPT TO THEIR NEEDS, LEARN THEIR PREFERENCES, AND PROVIDE PERSONALIZED EXPERIENCES.

ENTERPRISE ADOPTION:

BUSINESSES ARE ADOPTING AI PCS FOR ADVANCED DATA ANALYSIS, AUTOMATION, AND DECISION-MAKING TOOLS. THESE CAPABILITIES HELP IMPROVE PRODUCTIVITY, REDUCE OPERATIONAL COSTS, AND OFFER COMPETITIVE ADVANTAGES.

EXPERT OPINIONS ON AI PC GROWTH

- INDUSTRY ANALYSTS: GARTNER PREDICTS DOUBLE-DIGIT GROWTH IN AI PCS THROUGH 2027, DRIVEN BY AI ADVANCEMENTS. "AI PCS WILL BECOME AS ESSENTIAL AS SMARTPHONES," NOTED ONE ANALYST.
- MARK ZUCKERBERG (META): "AI-POWERED PCS WILL ANTICIPATE USER NEEDS, INTEGRATING TECHNOLOGY SEAMLESSLY INTO DAILY LIFE."
- SATYA NADELLA (MICROSOFT): "AI PCS WILL REDEFINE PRODUCTIVITY, ENABLING USERS TO ACHIEVE MORE WITH LESS EFFORT."
- JENSEN HUANG (NVIDIA): "AI-DRIVEN PCS WILL UNLOCK NEW POSSIBILITIES IN CREATIVE WORK, GAMING, AND EVERYDAY TASKS."

AI PCS: HOW USEFUL ARE THEY REALLY?

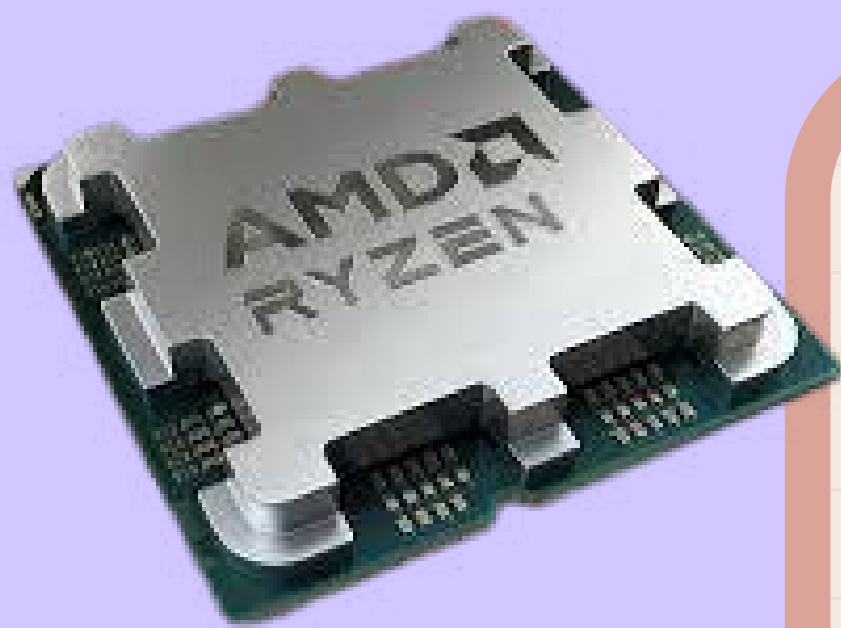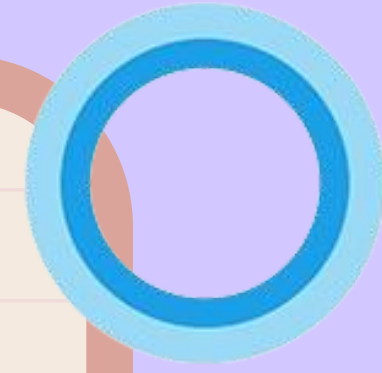## IMMEDIATE IMPACT (2024)

Current Features:

AI PCs in 2024 offer basic yet impactful features such as real-time language translation, predictive text, and voice assistants (e.g., AI-powered Cortana, Siri, etc.).

These features enhance productivity by streamlining tasks, automating routine activities, and providing intelligent suggestions based on user behavior.

Practical Applications:

For Students: AI PCs can assist in writing and research with features like grammar correction and reference management.

For Professionals: AI can help manage schedules, respond to emails, and perform data analysis, all with minimal user input.

SHORT-TERM USEFULNESS (2024-2025)

Processor Upgrades: New AI-specific processors like Intel's Core Ultra and AMD's Ryzen 8000G enhance AI tasks with built-in Neural Processing Units (NPUs).

Improved Capabilities:

Personalization: AI PCs learn user preferences, offering suggestions and tools proactively.

Multitasking: AI optimizes resources, enabling smoother performance across multiple applications.

Examples:

Content Creators: AI assists with video editing and subtitles.

Businesses: AI-driven tools improve data analysis and decision-making.
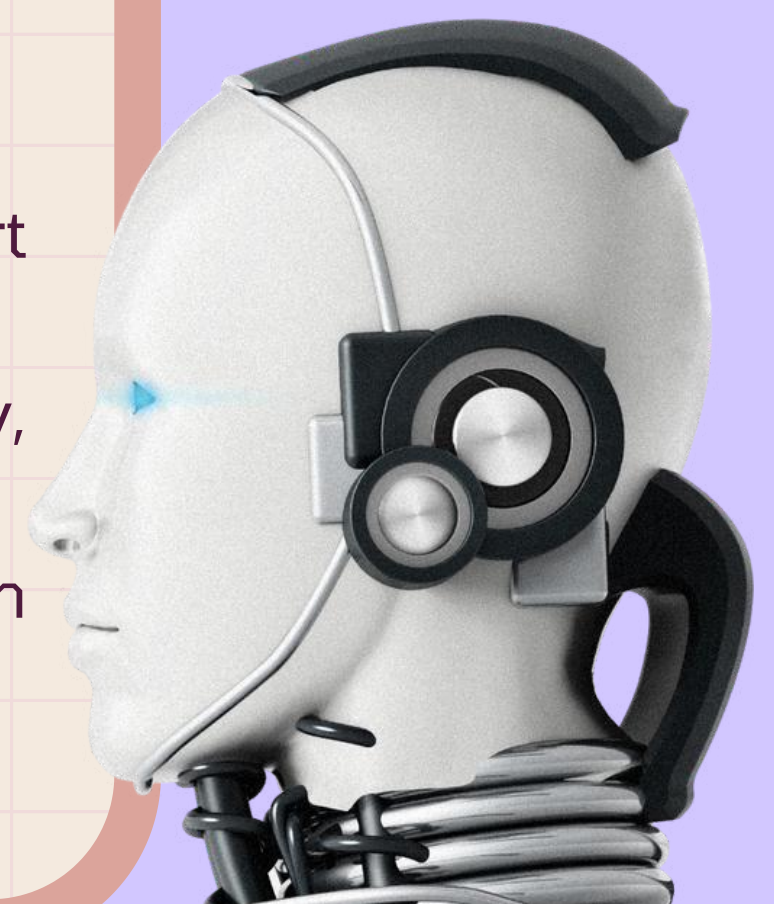
LONG-TERM VISION (2027 AND BEYOND)

Advanced AI Features: AI PCs will manage tasks autonomously, optimize workflows, and enhance security through predictive analytics.

Productivity Boost:

Automated Assistance: AI PCs will handle scheduling, report generation, and seamless integration with smart devices.

Home Integration: Central to smart homes, managing energy, security, and more with AI-driven insights.

Potential Uses: AI PCs will transform how we work and live, from organizing daily tasks to enhancing connected living environments.

AI PCS: THE BUZZ AND WHAT IT MEANS FOR YOU

MARKET SENTIMENT

PUBLIC OPINION:

EXCITEMENT: MANY TECH ENTHUSIASTS ARE EAGER TO ADOPT AI PCS, PRAISING THEIR ABILITY TO ENHANCE PRODUCTIVITY AND PERSONALIZATION.

SKEPTICISM: SOME CONSUMERS ARE CAUTIOUS, CONCERNED ABOUT PRIVACY ISSUES AND WHETHER AI PCS OFFER ENOUGH VALUE TO JUSTIFY THEIR HIGHER COST.

EXPERT OPINIONS:

INDUSTRY ANALYSTS RECOGNIZE THE POTENTIAL OF AI PCS BUT NOTE THAT WIDESPREAD ADOPTION DEPENDS ON AFFORDABILITY AND KILLER APPLICATIONS THAT MAKE AI PCS INDISPENSABLE. EXPERTS BELIEVE THESE DEVICES COULD RESHAPE HOW WE WORK AND LIVE, BUT THEY CAUTION THAT THE TECHNOLOGY NEEDS TO PROVE ITS EVERYDAY USEFULNESS TO THE AVERAGE CONSUMER.

SOCIAL MEDIA REACTIONS:

- POSITIVE BUZZ: ON PLATFORMS LIKE X (FORMERLY TWITTER), USERS ARE SHARING EXCITEMENT ABOUT AI PCS, PARTICULARLY THEIR MULTITASKING ABILITIES AND AI-DRIVEN FEATURES LIKE PREDICTIVE CONTENT RECOMMENDATIONS.
- MIXED FEELINGS: OTHERS EXPRESS CONCERN OVER AI'S INCREASING ROLE, QUESTIONING IF AI PCS WILL TRULY DELIVER ON THEIR PROMISES OR JUST BE A PASSING TREND.

CONCLUSION:

- **REFLECTING ON AI PCS:**
  - **AI PCS ARE AT THE FOREFRONT OF A TECHNOLOGICAL REVOLUTION, OFFERING POWERFUL FEATURES THAT PROMISE TO ENHANCE PRODUCTIVITY AND PERSONALIZATION. HOWEVER, THEY ARE STILL IN THE EARLY STAGES OF MAINSTREAM ADOPTION. AS AI TECHNOLOGY CONTINUES TO EVOLVE, THE IMPACT OF AI PCS ON OUR DAILY LIVES WILL LIKELY GROW SIGNIFICANTLY.**
- **LOOKING AHEAD:**
  - **THE JOURNEY OF AI PCS IS JUST BEGINNING, AND THE NEXT FEW YEARS WILL BE CRUCIAL IN DETERMINING THEIR ROLE IN THE TECH ECOSYSTEM. FOR CONSUMERS AND BUSINESSES ALIKE, STAYING INFORMED ABOUT AI ADVANCEMENTS WILL BE KEY TO MAKING THE MOST OF THIS EMERGING TECHNOLOGY.**