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| **IP3 2020 FOCUSED TECHNOLOGY CATEGORIES AND BRIEF DESCRIPTIONS** | |
| ***Advertising & Content Distribution***  A close up of a sign  Description automatically generated | Online advertising through Blogs, Emails, Newsletters, Social Media, Shares, Product reviews, Mobile Advertising, etc., and content distribution via various media channels including Internet TV, CATV, VoD, Streaming Media, P2P, Broadband, etc. |
| ***Artificial Intelligence (AI) & Machine Learning (ML)***  A close up of a logo  Description automatically generated | AI creates intelligent machines that work like human brains.  ML studies algorithms and statistical models to perform tasks with no external inputs.  AI & ML are applied in fields such as Gaming, Natural Language Processing, Vision Systems, Speech Recognition, Intelligent Robots, and Handwriting Recognition.  AI & ML are included in products such as Virtual Assistant, Voice Recognition, Flying Drones, Media Streaming Services, Smart Home and Content Personalization. |
| ***Augmented (AR) & Virtual Reality (VR)***  A close up of a logo  Description automatically generated | Augmented reality (AR) is a type of interactive, reality-based display environment, which has capabilities of producing computer-generated display, sound, text and effects to enhance the user's real-world experience.  Examples of AR devices include, Head mounted Displays, Smart Glasses, Smart Helmet, and APPs.  VR technology most commonly uses VR headsets or multi-projected environments, sometimes combined with physical environments or props, to generate realistic images, sounds and other sensations. |
| ***Automotive & Mobility***  A close up of a sign  Description automatically generated | Automotive deals with design, development, manufacturing, marketing, and selling of motor vehicles and its parts.  Mobility covers multi-modal transport systems, VANETs (Platooning), Autonomous Fleets, Vehicle Electrification, Ride Sharing or Carpooling Services, Vehicle Software, Vehicle Control and Diagnostics, Electrical and Hybrid Vehicles, Vehicle Electronics, etc. |
| ***Blockchain & Financial Services***  A close up of a logo  Description automatically generated | Blockchain is a growing list of records linked using cryptography with each record having a cryptographic hash of previous record, a timestamp, and transaction data.  Blockchain is managed by a peer-to-peer network and provides secure and permanent ledger type of transaction.  It is used in many industries for safe and simple data processing.  Financial Services cover transactions related to Distributed Ledger, Digital ID, Data Sharing, Inventory Record Keeping, IOT, Banking, Transaction Security, Insurance, etc. |
| A close up of a logo  Description automatically generated***Cloud Computing & Web Service*** | Cloud computing covers on-demand availability of remote data storage, computing power and software.  Web services cover the tasks performed through the Internet.  Examples of cloud computing include SaaS, IaaS (infrastructure as a service), Virtualization, Distributed systems, web services, PaaS (platform as a service), RaaS (recovery as a service), DaaS (device as a service), Social Networking, Online Storage, Email, E-commerce, Searching, etc. |
| ***Computer Software & Hardware***  A close up of a sign  Description automatically generated | Computer software relates to a set of instructions such as applications and the operating system.  Computer hardware includes physical, tangible parts of a Computer, Server, Data Center, such as the Cabinet, Central Processing Unit, Monitor, Keyboard, Storage, Graphics Card, Sound Card,  Speakers, Motherboard, etc. |
| ***Health Tech & Healthcare IT***  A picture containing clock, fence  Description automatically generated | Digital health solutions and devices that may use databases, applications, mobiles, wearables, image processing, web services to facilitate connected diagnosis, treatment and monitoring of health.  Example devices include personal EKG, fitness bands, wearable smart devices, portable monitoring and diagnostic devices, electronic medical record, healthcare software, hospital management, telemedicine, robotic surgery, personal health monitoring APPs and software, etc. |
| ***Industrial & Manufacturing***  A close up of a sign  Description automatically generated | Industrial covers various technologies related to industrial manufacturing such as automation, robotics, equipment, assembly, control systems, applications and software solutions for management of industrial processes, electrical and mechanical processes and procedures, etc. |
| ***Internet of Things (IoT) &***  ***Smart Home***  ***A picture containing clock  Description automatically generated*** | IoT and smart home technology controls hardware devices and home appliances through the Internet.  This technology includes Smart Appliances, Smart Lighting System, HVAC Systems, Smart Security Systems, Environmental and Industrial Monitoring Systems, Wearable Devices, Logistics Management, Retails Industry, etc. |
| ***LED Lighting & Optoelectronics***  A picture containing sign  Description automatically generated | Optoelectronics cover electronic devices that source, detect and control light using components such as Photodiode, Solar Cells, LEDs and Laser Diodes.  These devices can be found in many applications such as military services, telecommunications, automatic access control systems and medical equipment.  LED lighting covers lights, luminaires, lighting devices, etc. that use LED as main source of light.  It finds application in night lighting, art lighting, outdoor lighting, signage, lighting in electronics and automotive industries, etc. |
| ***Location-Based Services (LBS) / Navigation***  A picture containing graphics, light, drawing, clock  Description automatically generated | LBS use real time geo data to provide information, entertainment or security.  Several applications include proximity-based marketing, travel information, roadside assistance, mobile workforce management, mobile apps, advertisements, geo-fencing, media streamlining, monitoring real time location, etc. |
| ***Medical Devices & Imaging***  A close up of a logo  Description automatically generated | Technology for clinical analysis and medical intervention.  Example technology includes monitoring and diagnostic devices, sleep apnea and sleep therapy, diabetes monitoring and management, implants and prosthesis, spinal and orthopedics, magnetic particle imaging, photo acoustic imaging, endoscopic devices, tomography, echocardiography, surgical devices, radiography, MRI, nuclear medicine, ultrasound, cardiovascular, pulmonary and general surgery devices, etc. |
| ***Retail & E-commerce***  A close up of a logo  Description automatically generated | Retail technology covers all aspects of the shopping experience through online and offline channels.  E-commerce websites, store management solutions, customer experience and tracking, payment solutions, point of sale equipment, etc. are examples of the technologies included.  It also includes order management and fulfillment, inventory tracking and management, warehouse management and automation, and retail hardware (displays, signage, etc.). |
| ***Semiconductor Manufacturing & Equipment***  A picture containing plate  Description automatically generated | Semiconductor technology covers components, devices and processes used for fabricating components and ICs.  Exemplary products include dicing machine, probing machines, sliced wafer demounting, cleaning machine, wafer edge grinding machine, polish grinders, transistors, chips, FPGAs, ICs, etc. |
| ***Wireless & Telecommunication***  A picture containing drawing, light  Description automatically generated | This technology relates to exchange of information over significant distances and refers to all types of voice, data and video transmission, Mobile Phones and Devices, Network technologies such as M2M communications, vehicle-to-vehicle communication, Adhoc-networks, LTE, LTE-Advanced, 3G, Wi-Fi, routers, base stations, protocols, conferencing, satellites, antennas, wireless ICs, broadband, telephones (wired and wireless), microwave communications, fiber optics, satellites, television broadcasting and telegraphs, communication software, billing and service plans, call centers, PBX systems, telecom monitoring, Bluetooth, NFC, RFID, etc. |