



Advanced IT & AI Robotics



先进信息技术
人工智能 机器人



Introduction 介绍



- Bricpoint India group has deep experience in AI & IT
- **Bricpoint India集团在人工智能和高级IT方面拥有丰富的经验**
- Experience of autonomous driving project
 - With a major auto brand
 - Integrating computer vision, machine & deep learning
- **自主性 汽车工程替 欧洲 汽车品牌 合流 计算机视觉, 机器学习, 深度学习**
- Completed AI based People Identity Program
- **完成基于人工智能的人员识别程序**
- Completed IoT based Retail Electronic Label & Payment solution programming
- **完成物联网零售电子标签和支付解决方案编程**

AI Expertise 深刻体验人工智能



- Our eKYC Blockchain (Based on “HyperLedger” & “Ethereum” blockchain platform) and AI stack
- Unique citizens Identity Program to identify people
- 度政府唯一身份识别计划，以识别人
- Facial recognition to analyse user behaviour in different markets
- 面部识别以分析不同市场中的用户行为
- Prediction of individual consumer behaviours and choices
- 预测个人消费者行为和选择
- Autonomous driving systems 自动驾驶汽车系统

eKYC = *Electronic Know Your Customer* 电子了解您的客户

AI Expertise 深刻体验人工智能



- IoT based Retail Electronic Shelf Label
 - 基于物联网的零售电子货架标签
- IoT platform for automated billing & collection service
 - 物联网平台，用于自动计费和收集服务
- AI platform to provide customer insights data based on retail analytics
 - AI平台基于零售分析提供客户洞察数据
- AI Data Analytics for push marketing by suggesting products for purchase based on purchase decisions history
 - 用于推送营销的AI数据分析，根据购买决策历史建议购买产品
- With face recognition system and an automated billing system based on NFC and Barcode
 - 具有人脸识别系统和基于NFC和条形码的自动计费系统

NFC = Near Field Communication 近场通信

AI Expertise 深刻体验人工智能



- eKYC Integrated device **eKYC集成设备**
 - Requiring expertise with fingerprint sensors and Android development
 - **需要指纹传感器和Android开发的专业知识**
 - Based on Qualcomm Snapdragon Platform with a display of 7"
 - **基于Qualcomm Snapdragon平台，显示7英寸**
- Programming for wearable payment capability integrating NFC and payment domain
- **针对NFC和支付域的可穿戴支付功能进行编程，使用万事达卡提供的NFC控制器和模拟器建立万事达卡支付协议**

Autonomous Driving System (ADS) 自动驾驶系统



- Autonomous automobile driving project
- 自动驾驶汽车项目
- Integration of technologies
 - Vision/proximity sensors, software intelligence, computer vision, machine and deep learning
- 技术整合
 - 视觉/接近传感器，软件智能，计算机视觉，机器人和深度学习

ADS Hardware Platform

自动驾驶系统 硬件平台



- Two High performance Renesas System-on-Chip (R-Car V3H & M3N) solution
- 4 Full HD Camera @ 30fps as Vision Sensors and 12 Lidar's as Proximity Sensors
- Full HD Video forwarding, AVB Display and Ethernet based system bus for host communication

ADS Software Applications

自动驾驶系统 软件应用



- Parking visualization multiple unique Views / 3D vehicle model display
- 停车可视化多个独特的视图/ 3D车辆模型显示
- Overlays for multiple driving assist scenarios / remote 360 views / 3D HMI
- 用于多种驾驶辅助场景/远程360视图/ 3D HMI的叠加
- Active park control, park assistant, valet parking
- 主动公园控制，公园助理，代客泊车
- Lane, kerb, soil and adverse weather detection
- 巷道，路缘，土壤和恶劣天气检测
- Recording data on theft, joy riding and general driving
- 记录和分析有关盗窃，欢乐骑行和一般驾驶的数据

ADS Algorithm Frameworks

自动驾驶系统 算法框架



- NFORM / VSLAM / PreFusion / DAS-LSMS
 - Deep learning / CNN
 - Trailer Towball locator / Trailers
 - 3D-HMi / Calibration / MTC
 - Soil/adverse weather, lane sensing, kerb detection
- **NFORM / VSLAM / PreFusion / DAS-LSMS**
 - **深度学习 / CNN**
 - **拖车毛球定位器 / 拖车**
 - **3D-HMi / 校准 / MTC**
 - **土壤 / 恶劣天气, 车道感应, 路缘检测**

Robotic Navigation System (RNS) 机器人导航系统



- We are experts in ADS advanced sensing & processing
- 我们是ADS先进传感和处理方面的专家
- ADS technology can be extended to RNS & drones
- 自动驾驶汽车驾驶系统技术可以扩展到机器人导航系统和无人机
- We are experts in integration of automotive, radar, aerospace, RF, security, motor control and battery management systems
- 我们在汽车，雷达，航空航天，射频，安全，电机控制和电池管理方面拥有深厚的专业知识
- Experts in designing both low-cost single microcontroller units (MCU) and highly sophisticated systems with multi-core redundant and heterogenous processing capability
- 我们在设计低成本单微控制器单元（MCU）和具有多核冗余和异构处理能力的高度复杂系统方面拥有深厚的专业知识

Robotics Navigation System (RNS) 机器人导航系统



- Bricpoint System-on-Chip (SoC) solutions
 - Highly integrated & optimised solutions in ultra-miniaturised form
 - Used by premier automotive manufacturers to meet demanding requirements
- **Bricpoint片上系统 (SoC) 解决方案**
 - 高度集成和优化的超小型化解决方案
 - 由顶级汽车制造商用于满足苛刻的要求
- Sense and avoid technologies, computer vision, machine and deep learning
 - Complemented by crypto-secure, meta-operating system framework
 - RTOS/ Linux based systems
- **了解并避免汽车碰撞，计算机视觉，机器人和深度学习。**
 - 由加密安全的元操作系统框架补充
 - 基于RTOS / Linux的系统

Robotics Navigation System (RNS)

机器人导航系统



- Multiple sensors and sensor fusion algorithms
- 多传感器和传感器融合算法
 - Inertial sensors enable the robot to accurately determine its position in space or the movement & orientation of an actuator
 - 惯性传感器使机器人能够准确地确定其在空间中的位置或致动器的运动和方向
 - Pressure sensors measure relative height above ground and/or speed
 - 压力传感器测量高于地面和/或速度的相对高度
 - Magnetic sensors provide high reliability angular or rotational measurement
 - 磁传感器提供高可靠性的角度或旋转测量
- Advanced and efficient field-oriented control (FOC) and ADRC control loops provided with additional processing power and analogue feedback
- 先进高效的磁场定向控制（FOC）和ADRC控制回路提供额外的处理能力和模拟反馈

Robotics Navigation System (RNS)

机器人导航系统



- Latest robots have networked architecture using high reliability LIN, CAN, CAN-FD & newest 2-Wire rugged automotive Ethernet interfaces
- 最新的机器人采用网络化架构，采用高可靠性LIN，CAN，CAN-FD和最新的2-Wire坚固型汽车以太网接口
- Our designed ADS chips are ideal for use in robotics applications, requiring PHYs & multiple power supplies
- 我们设计的ADS芯片非常适合用于机器人应用，需要PHY和多个电源

Robotics Navigation System (RNS)

机器人导航系统



- RNS require many different types of communications interfaces. We offer deep experience in purpose-built silicon and MCUs for proprietary secure radio systems, sub-GHz radios, SigFox, Wireless MBUS, BLE, ZigBee & 802.15.4 Thread Mesh networking
- **NS需要许多不同类型的通信接口。我们在专用安全无线电系统，sub-GHz无线电，SigFox，无线MBUS，BLE，ZigBee和802.15.4线程网络网络的专用芯片和MCU方面提供丰富的经验。**
- Our advanced proprietary software in operating systems, RTOS, hypervisors, security, bus protocols, sensor algorithms & analytics & networking protocols used in applications in robotics, drones & autonomous driving
- **我们的先进专有软件，适用于机器人，无人机和自动驾驶等应用中的操作系统，RTOS，虚拟机管理程序，安全性，总线协议，传感器算法和分析及网络协议。**

Strategic Partners 战略伙伴



- One of our partners is a leading chip producer with ISO 9001, TS 16949 (automotive), ISO 13485 & AS 9100(aerospace) certifications
- 我们的合作伙伴之一是拥有ISO 9001， TS 16949（汽车）， ISO 13485和AS 9100（航空航天）认证的领先芯片
- One of our other partners has state-of-the art facility which can handle the smallest to the most complex electronics
- 我们的其他合作伙伴之一拥有最先进的设施，可以处理从最小到最复杂的电子设备
 - *Product Development – DFM, DFT, DRC and other Design*
 - *PCBA & Functional Test – Dedicated Medium Volume, High Volume & Prototype lines*
 - *Mechanical Integration & Cable harnessing – For Complex Products*
 - *Module Integration and Assembly – Many Examples*
 - *Final Testing and Dispatch – Shipping to End Customer*



寻求合作伙伴共同开发，联合商业化和AI自动化机器人合资企业。如果您有兴趣，请联系我们。

Seeking partners for joint development, joint commercialisation and joint ventures in AI for autonomous robots. Contact us if interested.

Thank You
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