

Ram Kunchur

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Introduction:

A technology passionate & experienced professional with more than 15 years of industry experience in Tier-1 companies, 5 different countries (France, UK, USA, Australia and Portugal) with genuine desire and ability to engineer and develop life changing software products for betterment of human mankind with the help of immense power of technology

Summary:

- A highly dependable and experienced Lead Software Development Professional, Product Owner, Technical Architect/Manager or Project Management Leader with solid and proven background in team leading/management and development roles who can deliver bottom-line results.
 - A technology passionate & experienced professional more than **15 years** of industry experience in **Tier-1** companies, **5 different countries** with genuine desire and ability to engineer and develop life changing software products for betterment of human mankind with the help of immense power of technology
 - Expertise and vast experience in Enterprise Banking & Financial Software, Artificial Intelligence, Machine Learning, Automotive Systems, Airline Systems, Face Recognition Biometrics, Airport eGates & Utilities sector.
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- Experience in Autonomous Driving (AD) / Advance Driver Assistance Systems (ADAS), Autonomous (Self-driving) vehicle research simulators
 - Experience in Artificial Intelligence, Machine Learning, Deep Learning
 - Experience in Computer Vision based AI product development
 - Experience in Enterprise Grade Software and database development
 - Experience in R&D, Product Engineering
 - Developed various Computer Vision based perception models using CNN (Convolutional Neural Networks) which were integrated in ADAS applications
 - Leading BlackBerry QNX Center of Excellence at PathPartner (Member of KPIT Group)
 - Implemented simulation of Adaptive Cruise Control (ACC) using CARLA simulator on Qualcomm Snapdragon Ride board
 - Experience in LIDAR based object detection algorithm development for multi-LiDAR sensor and IMU sensor application
 - Designed and Developed ADAS product Driver Monitoring System which can detect driver drowsiness and distraction
 - Designed and Developed ADAS product Forward Collision Warning System which warns drivers of possible collision with leading vehicles
 - Developed high volume and high-speed industrial data loggers for logging data from various automotive and general sensors such as temperature, vibration, for engine vibration profiling;
 - Designed and Developed Artificial Intelligence - Computer Vision industrial automation applications based on CNN for anomaly/outlier detection and visual defect inspection systems for Automotive suppliers
 - Experience in BlackBerry QNX RTOS (ISO 26262 Functional safety certified OS)
 - Experienced in DevOps

Employment Profile

- Working with KPIT since Sep 2022 as **Subject Matter Expert (AD/ADAS)**
- Previously worked as a Consultant in the **Algorithms and Optimization Group (QNX COE)** at PathPartner Technologies (Member of KPIT Group), Bengaluru.
- Previously worked as Director of Technology at Gateware Technologies Pvt. Ltd, Bengaluru
- Previously worked as Professional Services Manager at Vision-Box, Bengaluru and Portugal
- Previously worked as R&D Manager at Itron Inc, Bengaluru, Australia and USA
- Previously worked as Associate at JP Morgan Chase & Co, Bengaluru
- Previously worked as Technical Leader at Aricent, Bengaluru & Australia
- Previously worked as Senior Software Engineer at Travelex, Mumbai and UK
- Previously worked as Senior Engineer – Product Development at SUNGARD, Pune
- Previously worked as Associate Technical Consultant at KPIT Cummins, Chennai & Paris (France)
- Previously worked as Programmer Analyst Trainee at Cognizant, Chennai

Educational Qualifications

Bachelor of Engineering in Information Science & Engineering with First Class,
Visvesvaraya Technological University

Honored as the "Best Outgoing Student [Male]" of the Information Science & Engineering Department for the 2003-2007 Batch. In Bachelor of Engineering (B.E) Degree.

Skill Summary

Development Language for Artificial Intelligence Projects: Python version 2.7 – 3.6, 3.8

Tools and Technologies: Python, C++, Android Studio (Java), Flask, JSON, HTML, CSS, Qt

Operating Systems: Windows and Linux

- Ubuntu 18.04 LTS (Bionic Beaver)
- Ubuntu 20.04 LTS (Focal Fossa)
- Nvidia Jetson Jetpack
- Microsoft Windows 10, XP & 7.
- Raspbian OS
- Android OS
- BlackBerry QNX RTOS
- ROS

HARDWARE:

Exposure to various at Automotive ECUs: Qualcomm SA8155, Ride, SA6155

Exposure to various Single Board Computers (SBCs): Nvidia Jetson Nano, Hard-Kernel Odroid C4, Raspberry Pi, RockPi, ASUS Tinker Board and Mini-PCs: Intel NUC, GIGABYTE BRIX Intel Movidius NCS (Neural Compute Stick), Depth Cameras for AI Computer Vision.

Databases:

MySQL, Microsoft SQL Server 2005 and 2008, Sybase ASE 12.5, Oracle 11g with PL/SQL, Ingres, SQLite.

Database UI Tools: MySQL Workbench, Microsoft SQL Server Management Studio, CAST SQL Builder, SQL Advantage, PL/SQL Developer

Source and Version Control: Borland StarTeam, PVCS, Perforce, SVN, TFS, GIT, VSTS (Visual Studio Team Services)

Data Visualization: MS-Excel, Power BI

Other Tools: JIRA, HP Quality Center, Microsoft Office, Outlook Express, Trello, Confluence.

Work Summary

Projects Executed at PathPartner & KPIT:

Project Name	Renault SDV (Software Defined Vehicle) – Working as Solution Architect
Project Summary	Currently working as Solution Architect for ADAS and Safety features of Renault SDV Platform Program, there are around 20 squads each dedicated to various areas of SDV program which is a huge program by KPIT with Renault involving 200+ team members, we are developing SDV Platform for Renault.
Tools & Environment	Windows, Linux, C++, Architecture Design using MagicDraw
Responsibilities	<p>Involved In following:</p> <ul style="list-style-type: none">• Member and active contributor of Model-based systems engineering (MBSE) team for Renault SDV program• Architecture Design for PIU and PCU for SDV Platform ISO 26262 Functional Safety Requirements (FSR) and Technical Safety requirements (TSR) - (for example such as brake, stop lamp etc)• Working as scrum master (50% allocation) to create sprint planning, mapping requirements to user stories, epics, tasks and assigning to team members• Co-ordination with Renault client team and KPIT team for requirement analysis, technical discussions for solution proposal and architecture design, and project management• Closely working with other technical partners such as Valeo etc;
Project Name	LIDAR based object detection for a giant Japanese automotive manufacturer - KPIT
Project Summary	<p>Design and development of LIDAR based object detection algorithms which can read data from multiple LIDARs mounted on vehicle to detect various objects such as vehicle, motorcyclists, pedestrians, stationary objects Usage of IMU sensor data to determine vehicle speed, velocity etc. Project also involved determination of object tracking and vehicle direction estimation</p> <p>Annotation of Point cloud data to compare algorithms accuracy and performance as a part of validation activity</p>
Tools & Environment	Linux, ROS, rosbag, C++, Python, LabelCloud annotation tool, CloudCompare, VSCode
Responsibilities	<p>Involved In following:</p> <ul style="list-style-type: none">• Design, development and implementation of object detection algorithms

	<ul style="list-style-type: none"> Setting up of annotation activities and tools, trained team on annotation of 3D LIDAR Point cloud data Co-ordination with Japanese client team for requirement analysis, technical discussions for solution proposal, demonstration and project management
Responsibilities	BMW POSIX Optimization, Munich, Germany and Bangalore, India
Project Summary	<p>Migration of existing BMW C++ POSIX applications from SafeLinux to BlackBerry QNX, Measuring performance after migration and optimization of migrated code</p> <p>Developing applications on Python to read and parse TraceLogs generated by QNX to visualize performance</p>
Tools & Environment	Linux, Windows, BB QNX, C++ (Momentics IDE), Python, VS Code
Responsibilities	<p>Migration of existing BMW C++ POSIX applications from SafeLinux to BlackBerry QNX, Measuring performance after migration and optimization of migrated code</p> <p>Developing applications on Python to read and parse TraceLogs generated by QNX to visualize performance</p>
Responsibilities	Building a QNX COE at PathPartner to cater to various applications and products on BlackBerry QNX Platform for AD and ADAS domain

Project Name	Qualcomm POC - KPIT
Project Summary	<p>Running of KPIT ACC (Adaptive Cruise Control) and ACC-FUSION on Qualcomm Snapdragon Ride board on QNX platform to work with CARLA Simulator</p> <p>The purpose of this project was to deploy and run ACC and ACC Fusion application on Qualcomm board running on QNX OS on top of AUTOSAR framework.</p> <p>ACC functionality validation done using CARLA simulator.</p> <p>Input signals sent from CARLA Simulator running on Independent GPU based PC to Qualcomm board running ACC application, based on throttle/brake output signal values computed by ACC algorithm control Adaptive Cruise of vehicle in CARLA simulator environment.</p> <p>The task involved attaching sensors to Ego vehicle and reading data from</p>

	<p>various sensors such as LIDAR, RADAR, RGB and Depth Cameras, GNSS, Obstacle sensors etc;</p> <p>ACC Fusion involves reading data from various sensors, fusing them together and providing inputs to algorithms (developed using MATLAB Simulink) to derive vehicle drive parameters such as throttle, braking etc;</p>
Tools & Environment	Ubuntu, BlackBerry QNX, C++, Python, CARLA Simulator, VS Code
Responsibilities	<p>Involved In following:</p> <ul style="list-style-type: none"> Deriving all input signals from CARLA Server environment of ego and target vehicle. Implementation of UDP communication between CARLA PC and Qualcomm Ride board to send and receive ACC input and output signals Controlling CARLA vehicle using output signal received from Qualcomm Ride board which is running ACC application

Project Name	Qualcomm POC – KPI
Project Summary	<p>Measuring CPU and Memory Utilization of ACC application running on Qualcomm board</p> <p>The purpose of this project was measure CPU and memory utilization of ACC application running on Qualcomm board on QNX OS on top of AUTOSAR framework.</p> <p>The measured data was saved in CSV file on Qualcomm board QNX filesystem.</p> <p>Python program was used to plot the graph using data captured for visual representation of the results using matplotlib library</p>
Tools & Environment	Ubuntu, BlackBerry QNX, C++ (Momentics IDE), Python, CARLA Simulator, VS Code, QEMU
Responsibilities	Involved In following:

	<ul style="list-style-type: none"> • Providing inputs to developers on implementation of CPU and Memory Utilization using C++ both on Linux and QNX Platforms • Participating in code reviews • Developing Python program to plot the graph using data captured
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Projects Executed at Gateware Technologies Pvt. Ltd:

Project Name	Artificial Intelligence based medical imaging system to detect COVID-19 from CT-SCAN images
Project Summary	<p>AWARDED FOR EXCELLENCE IN ARTIFICIAL INTELLIGENCE BY GOVT. OF INDIA FOR COVID SOLUTION:</p> <p>I am extremely proud and humbled to state that I am awarded and recognized by:</p> <ul style="list-style-type: none"> - Ministry of Electronics & Information Technology (MeitY) - Centre for Development of Advanced Computing (C-DAC), Pune - National Supercomputing Mission (NSM) and - Department of Science & Technology (DST), Govt. of India. <p>My software was awarded with Innovative Implementable Idea award, one among All India Top 5 companies for providing Artificial Intelligence based solution for COVID-19 diagnosis and detection using medical imaging, 450+ companies and other entities participated in this event.</p>
Tools & Environment	Ubuntu, Python, Computer Vision, AI algorithms, MySQL Database, .NET WPF
Responsibilities	<p>Involved in:</p> <ul style="list-style-type: none"> • Conceptualization, Design and Development of application and algorithm



Project Name	Face recognition based Smart Gate for security and access control
Project Summary	Face recognition based Smart Gate for security and access control
Tools & Environment	Microsoft .NET, Visual Studio, MS-SQL
Responsibilities	Involved in: <ul style="list-style-type: none"> Design and Development of applications Deployment and maintenance Change request management

Project Name	Face recognition based Smart Gate for security and access control
Project Summary	Face recognition based Smart Gate for security and access control
Tools & Environment	Microsoft .NET, Visual Studio, MS-SQL
Responsibilities	Involved in: <ul style="list-style-type: none"> ● Design and Development of applications ● Deployment and maintenance ● Change request management

Project Name	Artificial Intelligence based Face recognition attendance system on Android & Linux OS
Project Summary	Artificial Intelligence based Face recognition attendance system on Linux OS for employee attendance management
Tools & Environment	Ubuntu, Python, Computer Vision, AI algorithms, MySQL Database, .NET WPF
Responsibilities	Involved in: <ul style="list-style-type: none"> ● Design and Development of applications ● Deployment and maintenance ● Change request management

Project Name	Artificial Intelligence based Automated Human Intrusion Surveillance Systems for real-time intrusion detection on Linux/Windows
Project Summary	Artificial Intelligence based Automated Human Intrusion Surveillance Systems for real-time intrusion detection on Linux/Windows, implemented in banking for security control on CCTV cameras
Tools & Environment	Ubuntu, Python, Computer Vision, AI algorithms, MySQL Database, .NET WPF
Responsibilities	Involved in: <ul style="list-style-type: none"> ● Design and Development of applications ● Deployment and maintenance

Projects Executed at Vision-Box India Pvt. Ltd:

Project Name	DigiYatra - Biometric Face Recognition eGates at Bengaluru International Airport
Project Summary	DigiYatra - Biometric Face Recognition eGates at Bengaluru International Airport, these Gates are used for seamless passenger flow throughout various checkpoints in airports, part of Biometric Boarding as a part of DigiYatra platform, a program by Govt. of India and Ministry of Civil Aviation
Tools & Environment	Microsoft C#.NET, Microsoft SQL Server, Face recognition algorithms, NodeJS, ElectronJS, Rabbit MQ, WSO2, C++, Chocolatey, Elastic Search.
Responsibilities	<p>Involved In</p> <ul style="list-style-type: none">● Creation of Technical Design Specifications based on Product Requirement Documents● Development and deployment of gate software on smart gates using NIST listed algorithms which have undergone FRVT – Face Recognition Vendor Test● Quality Assurance management● Completely owned and successfully completed Amadeus Departure Control System (Web Services) certification for Vistara Airlines to integrate airline data with our Face Recognition Gates deployed at Bengaluru Airport network● Successful Go-Live, first airport in India to start DigiYatra

Project Name	Eurostar Railways – Automated Border Control, Gare du Nord, Paris, France
Project Summary	Eurostar Railways – Automated Border Control, Gare du Nord, Paris, France, Face recognition based automated border control based on passport scan
Tools & Environment	Microsoft C#.NET, Microsoft SQL Server, Face recognition algorithms
Responsibilities	<ul style="list-style-type: none">● Managed Automated Border Control project at Eurostar Railways: London-Paris railway network● Visited Ministry of Interior, Paris to gather requirements and project related meetings

Project Executed at Itron India Pvt. Ltd:

Project Name	Smart Energy Meter Data Management – Market Transactions Suite – Itron (Water, Gas and Electric Meter)
Project Summary	<p>Smart Energy Meter Data Management – Market Transactions Suite – Itron (Water, Gas and Electric Meter) , this application was used by Energy Companies and Electric meters B2B and Meter Data Management, these project underwent Australian Energy Market project (AEMC) Power of Choice Program</p> <p>Honored with Outstanding Achievement Award in MTS Power of Choice Award.</p>
Tools & Environment	PowerBuilder v10.5, Oracle 11g, PL/SQL Developer, Microsoft Visual Studio Team Services for Project Management & Defect Management, Perforce, GIT (source & version control), Novalsys Appeon for PowerBuilder
Responsibilities	<p>Involved In</p> <ul style="list-style-type: none">● Creation of Technical Design Specifications based on Product Requirement Documents● In a team of 80 members, played role of DevOps Technical Program Manager (TPM) and managing a team of 10 members which is comprised of developers (UI and Database, located India and USA) and QA Test Engineers.● Owned 100% responsibility of UI and UI related database work.● Part of R&D DevOps Team for Power of Choice program for Australian Energy Market project, Substantial reforms to the National Electricity Market (NEM) are underway following recommendations to the state and federal governments by the Australian Energy Market Commission (AEMC's) Power of Choice review – giving consumers options in the way they use electricity.● Working in DevOps and Agile which coexist for Expedited Delivery.● Travelled to Raleigh, NC, USA to train team members located in Itron Raleigh office.● Played crucial part in a team of 3 members who setup of Continuous Integration Build environment for our Project using Git, VSTS, Jenkins.

Project Executed at JP Morgan Chase & Co, India:

Project Name	Corporate & Investment Banking – Alternative Investment Services – Hedge Fund Services.
Project Summary	<p>Corporate & Investment Banking – Alternative Investment Services – Hedge Fund Services.</p> <p>Product Owner & only resource in offshore team and led 6 PowerBuilder applications with Sybase and MS-SQL database as back-end which are Legacy systems of JP Morgan Chase:</p>

	<ol style="list-style-type: none"> 1. Global Security Master System 2. Cash Wire System 3. Partnership Model System 4. Financial Reporting System 5. Daily P&L System 6. Hedge Fund Service – Issuer System
Tools & Environment	SAP PowerBuilder 12.6, Sybase ASE, Microsoft SQL Server 2008, SVN (source control), Informatica PowerCenter, Microsoft SSIS, Microsoft SSRS.
Responsibilities	<ul style="list-style-type: none"> ● Development – analysis, defect fixing, enhancements, working directly with operations/business users to gather requirements & understand issues etc; ● Unit testing – complete unit testing for all the applications. ● Build creation, source-control, version-control and release management. ● Application Packaging, Application scanning for security check against vulnerabilities ● Coordinating UAT activities ● Coordinating and deployment to Production & Disaster Recovery environment

Project Executed at Aricent Technologies:

Project Name	Smart Energy Meter Data Management – Market Transactions Suite – Itron (Water, Gas and Electric Meter)
Project Summary	<p>Smart Energy Meter Data Management – Market Transactions Suite – Itron (Water, Gas and Electric Meter) , this application was used by Energy Companies and Electric meters B2B and Meter Data Management</p> <p>Honored with Individual Excellence Award for Quality Delivery by Aricent.</p>
Tools & Environment	PowerBuilder v10.5, Oracle 11g, PL/SQL Developer, Microsoft Visual Studio Team Services for Project Management & Defect Management, Perforce, GIT (source & version control)
Responsibilities	<ul style="list-style-type: none"> ● Creation of Technical Specifications, Analysis, Development ● Unit Testing, Source Control & Build management.

Project Executed at Travelex India Pvt. Ltd:

Project Name	Thomas Cook Total Operations Management (TOM), Travelex Currency Online (COL), Travelex Retail Automated Processing System (RAP)
Project Summary	Joined Travelex as Senior Software Engineer; Travelex was under massive Global transformation known as ONE Platform, with Mumbai office chosen as Global Delivery Centre from where all projects across the world from Travelex would be transitioned from various Global development centers and driven from India.
Tools & Environment	Sybase PowerBuilder v10, v12, Microsoft SQL Server 2008, Sybase ASE 12.5, Ingres Database, SVN for source and version control, JIRA, SQL Advantage.
Responsibilities	<p>A week after joining Travelex I was entrusted with recruitment and Interview responsibilities for PowerBuilder and Database developers, both Junior and Senior Roles</p> <p>Single handedly conducted 60+ Interviews for PowerBuilder and Database developer candidates and successfully handled recruitment process with rigorous assessment of candidates (right from 1 Year to 10 Years of experience) in fast-paced, deadline-based recruitment and offered to candidates.</p> <p>Setup an application support team for Toronto based applications, completed Knowledge transition from Toronto team from Mumbai and successfully trained, mentored and setup a team with 24x7 support and started supporting applications in record time, worked in day as well as night shifts to ensure smooth transition of Support activities from North America, Canada and completely took over the application support activities.</p> <p>Was awarded the prestigious Performance and Value Champ of the quarter for outstanding contribution of above specified Application Support transition, setup and take-over and received various appreciation mails from Users, Project Manager and Business for high quality work and flawless transition.</p> <p>Due my high performance and out of the box solution providing capabilities I was offered a role of Technical Architect for Travelex Wholesale and Partner – W&P ONE Platform stream once returning to India.</p>

Project Executed at SUNGARD Global Services, India:

Project Name	AvantGard Treasury – Globe\$ Product.
Project Summary	AvantGard Treasury – Globe\$ Product is complete Treasury Management Product used by various high-end enterprises, banking and financial customers

Tools & Environment	Sybase PowerBuilder 12, Microsoft SQL Server 2008, Oracle 11g, PVCS
Responsibilities	<ul style="list-style-type: none"> ● Member of Product R&D Team, Technical Design Specification creation, Analysis ● Development; coding (new development, improvements, enhancements to existing functionalities ● Defect fixing, client specific functionality design and implementation, demonstration) and Unit Testing. ● Interaction with QA team, helpdesk team and attending Scrum meeting on daily basis with US team (Vice-President, product owner and business analysts) and offshore team for status updates.

Projects Executed at KPIT Cummins Infosystems, India:

Project Name	AMANDA – Asset Management and Data Administration. OMS – Order Management System – BNP Paribas Securities Services
Project Summary	AMANDA – Asset Management and Data Administration. OMS – Order Management System are two critical and core applications used by operations team in BNP Paribas Securities Services across the world.
Tools & Environment	Sybase PowerBuilder 9 and 10.5, Sybase ASE 12.5, Borland StarTeam (source & version control), HP Quality Center, IBM WebSphere Transformation Extender, Unix Shell Scripting, Putty.
Responsibilities	<ul style="list-style-type: none"> ● Technical Analysis and assisting in Specifications Document creation, Development, ● Unit testing, Integration System Testing, User Acceptance Testing, ● Change Request development, Defect/Bug Fixing ● Advanced Application and Operations Training. ● Knowledge repository building for offshore team in Chennai.

Project Executed at Cognizant Technology Solutions:

Project Name	Sony-BMG Project Management Office
Project Summary	Sony-BMG Project Management Office is a royalty management system for Sony-BMG Music Label company
Tools & Environment	SQL Server, PowerBuilder 9.0, ASP.NET, MOSS
Responsibilities	Played an important role in Sony-BMG Music Entertainment Project as a developer in PMO -Project Management Office which involved development, unit testing and documentation.