SURYAKIRAN KASTURI

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Product Development Leader ~ Full stack ~ Process Automation

Offering prolific experience in the domain of software designing, testing, implementation and support; seeking senior level assignments across the industry, while bringing the following deliverables:

***Strategic Planning ~ Performance Improvement ~ Full Product Lifecycle ~ Cloud ~ Analytics
~ Diverse Technologies ~ Mobile Apps ~ Mentoring and coaching teams ~ CI/CD ~ TDD***

- ✓ Presenter at eXtreme Programming Conference, India 2015 on TDD in embedded environment
    - ✓ Member of the Core Agile team at IDC and organizer of the first Agile Day at Intuit
    - ✓ Member of the innovation council and have organized innovation events at Allstate

Career Precis

- ✓ Product Development Leader with experience in leading teams while being an IC during design and development
- ✓ Expertise with: Marketing, Software Design, Development and Maintenance and using Agile and SDLC methodologies
- ✓ Understanding the big picture and identifying the approach to make this a reality by utilizing the relevant tools
- ✓ Microsoft Stack (18+ years), C/C++ (16+ years), Web (10+ years), Cloud, SAAS and IOT (5+ years), .Net (10+ years), .Net Core (3+ years), Video (9+ years), Microservices (3+ years), Docker (2+ years), Java (2.5 + years), People Management (7+ years)), Data Analytics (2 + years), Mobile Apps (4+ years)
- ✓ Developed multiple products from scratch (8 products) and re-architected multiple modules across my entire career
- ✓ Technical proficiency in various software development languages, applications and databases and possess knowledge of PHP, C# (WPF, ASP.Net), Objective-C, MFC, ATL COM/DCOM, Angular 5, Node JS, ReactNative, , Expo, Bootstrap OS: Linux, Windows, iOS and Android, ServiceNow(4+ years), XML, JSON, REST, Fiddler and Postman, Wireshark
- ✓ Open Source incorporated: Apache Thrift, Boost, POCO, PJSIP, LibJingle, Cassandra, AWS SDK, Azure
- ✓ Utilizing SOLID principles and patterns to design the system and utilizing UT's to help in maintaining code quality
- ✓ Software development tools: Visual Studio, ServiceNow, Jenkins, Clear case, Git, CVS, SVN, VSS and Perforce.
- ✓ Protocols: SIP, RTP, STUN, TURN, ICE, RTSP; Google Protocol Buffer, TCP/IP, HTTP

Highlights:
- ✓ Coaching and Mentoring:
    - o Excellent interpersonal and communication skills with ability to handle technically complex discussions with less experienced engineers and non-technical audience
    - o Building a cohesive team where developers and QE work together to ensure the quality of deliverables, accomplished using TDD and Agile. Code and Design reviews
    - o Evaluating and training the teams on new technology trends and also ensuring involvement in technology evaluation
    - o Provided knowledge sharing sessions on Cloud, IOT, Agility and TDD
    - o Excellent verbal and written communication skills. Experience in working with offshore teams located mainly in USA, Canada and Japan (14+ years)

- ✓ Process:
    - o Expertise across Waterfall (Starting from requirements Gathering, HLD, LLD, Development to Release) and Agile methodologies (Scrum, XP and Kanban)
    - o Project Setup & Scoping, Requirement Analysis & Technical Specifications, Effort & Cost Estimates, Risk Management, Planning, Monitoring and Tracking, Reporting & Communication, Process Management & Compliance, Issue & Change Management, Resource Optimization
    - o Extensive experience in interacting with clients/Product Owner to gather and fine tune requirements and generating possible solutions.
    - o Ensuring clear user Stories and estimation using methodologies like planning poker

Highlights Contd:

- ✓ Process
    - o Expertise with different Agile tools like Rally, Agile Zen, Jira Agile (Green Hopper) and Trello
    - o Adept in the use and fitment of the process methodologies : Scrum, Kanban, XP, TDD, Six Sigma and Lean

- ✓ Distributed Teams:
    - o Excellent verbal and written communication skills. Experience in working with offshore teams (14+ years)
    - o Experience with organizing Agile teams in geographically distributed locations using tools like Etherpad, Slack, Confluence, etc

- ✓ Design and Performance:
    - o Strong understanding of OO design and associated modeling tools(UML)
    - o Experience with performance analysis tools, including: code profilers and performance analyzers, understanding the big picture and able to think strategically to develop comprehensive detailed specifications.
    - o Involved in Risk Analysis, Architectural validation and risk mitigation action plans.

- ✓ Cryptography : Secure P2P client at Seastar labs and VPN integration at iPass
    - o Asymmetric, signatures to ensure that the connection is secure
    - o Supporting various protocols like PEAP, MSCHAP, Kerberos etc for VPN integration
    - o Encryption algorithms : RSA and AES. Hashing algorithms : CRC, Checksum, SHA512, MD5
    - o Secure development and using of tools like Coverity to do static code analysis

- ✓ Blockchain
    - o Mining of ethereum, bitcoin, etc using the block chain framework for around 1.5 years now
    - o Understanding of key concepts : hyperledger, blocks, mining network, the chain
    - o Evaluating the multiple block chain frameworks and identifying specific features :
        - ▪ Insurance specific blockchain frameworks like : B3I and RiskBlock Alliance
        - ▪ Payments : Mastercard, Visa and JP Morgan have block chain frameworks
        - ▪ Cyber security

- ✓ Cloud infrastructure:
    - o Usage of cloud: AWS, Azure has helped in ensuring scalability of the application by handling load balancing. The caveat being higher charges if we have an unexpected load
    - o AWS Lambda, API Gateway, AWS S3, EC2 and Docker
    - o Distributed database: This has helped in ensuring connectivity to customer even if a server has gone down. Challenge is to ensure that the data is kept in sync and ensuring switch between servers is as seamless as possible

Awards Received

Intuit: Received "Star of the Quarter" award- Q1 2014

Honeywell: Six Sigma Plus Green Belt certification

Celstream: Received Team Excellence Award (for entire team) at for providing innovative solutions to the customer. Process Compliance Award

Academia

Bachelor of Engineering (Electronics and Communication); Malnad College of Engineering, Hassan (MCE); 1999

ANNEXURE

Company Name	Aptean
Designation	**R & D Manager (Equivalent to Sr. Engineering Manager)**
Project Title	ERP SAAS migration
Duration	Aug'19 – current
Team Size	32 (23 Dev including 2 architects and 1 associate architect + 8 QA + 1 Business Analyst)
Environment	Sencha (Ext JS), VB .Net, VFP, X#, C# (.Net Core)
Tools Used	Visual Studio, TFS (SCM), Jenkins(CI/CD), SQL Server, Azure
Synopsis	Leading the architecture team and setting up the Azure environment for the legacy on-prem to SAAS migration of the ERP package. Beta release is Dec 2019 and microservices in 2020
Deliverables	Owning and managing a budget of $250k and responsible for a product generating $30M revenue. Working with Product Owners and Business to ensure that projects are tracked using Agile. Ensuring requirements are prioritized and demoed. Stakeholders include executive management. Microservices POC done using docker to help in scaling the services faster depending on the load. Initial discussions were around the Azure services that we would use: Azure Monitor, SignalR, Azure Functions, SSRS, Azure Blob storage and use of existing Load balancing functionality. Business logic changes to support multi-tenancy and migration to HTTP calls from WCF TCP/IP. Participated in the design of the Azure infrastructure. Currently working on the following: 1. Performance Testing (Automating the testing of API and new UI screens) . This would help in understanding the current load of the system so we can identify the right configuration of the Azure servers and associated infrastructure to manage the cost. Also will ensure we can monitor the quality of the deployments 2. Security Testing: To identify potential issues in the code, network infrastructure and this would be a part of the CI/CD pipeline 3. Identifying CI/CD specifications to run the tests and also manage upgrades, etc. 4. Working with 3rd party to help in getting them ready for the associated changes due to the SAAS migration. Regular activities like timesheet monitoring, leave approvals, appraisals, goals, career planning, project reports, metrics, etc.

Company Name	**AWS Truepower a UL Company**
Designation	**Software Development Manager (Equivalent to Engineering Manager)**
Project Title	Manage and deliver features for the BU
Duration	Aug'18 – May'19
Team Size	6
Environment	Angular 5, 6, PHP 7, Android, C++, C#, ReactNative, Node JS, Expo
Tools Used	Eclipse, Visual Studio Code, Android Studio, SVN (SCM), Bugzilla, Jenkins(CI/CD), MySQL, Private Cloud
Synopsis	Small team of developers automating different parts of the organization with tight deadlines. Releases done within 15 days to max 3 months and multiple projects in progress. IC
Deliverables	Owned and delivered new UI for windows desktop app using Telerik modules (C#). Implemented features in Angular and PHP. Involved in design of application, database including identifying the right tech stack to quickly deliver product. Supported the team by doing code reviews and resolving technical issues. Mentored the team on tech stack or libraries needed to speed up development. Ex: Use of Laravel framework to help in ensuring the code is manageable. Also the use of ReactNative to ensure that we can write code once and let it run across different devices like Android and iOS. Requirements gathering, effort estimation, project planning, design and coding. Resolving cross team dependencies. Interacting with marketing to identify requirements and pricing while working with different stakeholders to ensure that the products can be delivered which would meet all the standards. Evaluating GDPR and other legal requirements to ensure we are compliant. Working on process and technology improvements across multiple teams within the BU. Involved in design and development including code reviews. Projects in the renewable energy domain. Stakeholder management which could include internal and external stakeholders who are customers for the initiatives that we are running within the organization. This work is being owned

and delivered by the Bangalore team. Identifying areas of improvements across process and technology to ensure faster delivery and improved quality with smaller teams. Working with the technical stakeholders to identify ways to deliver products quicker which include: Microservices, API governance, Blockchain, automated tools like Jenkins, Augmented Reality, etc. Regular activities like timesheet monitoring, leave approvals, appraisals, goals, etc.

Company Name	**Allstate Solutions Private Limited**
Designation	**Engineering Manager**
Project Title	Manage and deliver features for the BU
Duration	Sep'16 – Feb '18
Team Size	53
Environment	Objective-C, Android, Swift, Java web services, JavaScript and ASP .Net
Tools Used	Eclipse, Fiddler, GitHub, VSTS (SCM), Jira, Jenkins(CI/CD), Slack, Splunk, Hive, Cassandra
Synopsis	Three different teams are handling different projects: 1. Production support and feature development in Java Spring 2. Sdk built separately for Android and iOS 3. Local project
Deliverables	Performance evaluation and improvements in the application by using cloud infrastructure. Reviewing the architecture and code changes. Supporting the team by removing bottlenecks related to infrastructure, requirements. Part of the innovation council. Helped the team migrate to Agile. Helped in evaluating the current status of the scrum process followed. Made course corrections including switching the team to Kanban so that it can deliver better quality. Also worked with the stakeholders to migrate team from waterfall to Agile. Evaluating Java Spring to implement new features. Created a proposal for the API governance strategy for the Business Unit using Microservices. RPA prototyping done using BluePrism and UIPath. Evaluating Cassandra, Kafka and Hadoop. Also began work on altering the business logic of SDK so as to make it cross platform which would speed up the development process and reduce maintenance time. Working with our counterparts to help the team get development work. Ensured delivery of in house project and made the team get Best Project 2016 award. Regular activities like timesheet monitoring, leave approvals, appraisals, goals, etc. Led a team of data analysts (Data Architect and Data Intern)

Company Name	**Seastar Labs Pvt Ltd (Formerly Mamigo Inc)**
Designation	**Associate Architect**
Project Title	Design and development of the Eye4k and m4kr software and firmware.
Duration	Feb'15 – Apr'15, Feb'16 – July' 16
Team Size	8
Environment	C++, C#, PHP, AWS, XML, JSON and JavaScript on Windows and Linux
Tools Used	Eclipse, Visual Studio .NET 2010, 2012, Fiddler, WinDbg, SVN (SCM), Jira, Jenkins(CI/CD), TDD
Synopsis	The hardware device would have multiple 4K (3840x2160) cameras connected to it. The work involved in writing both the firmware and PC side software which would accept live video streams at 720p (1280x720) and downloading recording video at 4K(3840x2160)
Deliverables	Task allocation, tracking and providing weekly status reports. Risk analysis and risk mitigation plans Designing the architecture for this product which was being developed from scratch using TDD Using OpenCV and GPU for video streaming. Video processing. Analyzing and implementing the AWS SDK with PHP to upload videos for remote processing. Micro services were created to allow third parties to integrate the apis. Developing the product by using TDD as a method to ensure code quality is maintained. Using delegates to support callbacks during device discovery (Bonjour) and for events. Evaluated the TPL library but found that threading was more appropriate for the current requirement. Utilizing the ffmpeg library for merging and saving videos to disk for review. Identifying and prototyping integration of bandwidth limiting software to simulate remote streaming. IOT prototyping using AWS cloud where the camera video was controlled from a desktop via AWS IOT service

Project Title	Development of a messaging iPhone app using Objective-C
Duration	May'15 – Jan'16

Team Size	7
Environment	C, C++, Objective-C on Mac, RTP, SIP, ICE, STUN, TURN, libjingle, PJSIP, GPB and Android
Tools Used	XCode, Eclipse, SVN (SCM), Jira, Jenkins(CI/CD), TDD, OCLint, PMD
Synopsis	This app was having the following features: Secure chat, calling functionality, transfer of files across different OS namely iPhone and Android.
Deliverables	Task allocation, tracking and providing weekly status reports. Risk analysis and risk mitigation plans Daily standup meeting with client The frameworks used for business logic were libjingle, PJSIP. Google Protocol Buffer was used to ensure that the communication was seamless and can be processed at both ends. Evaluating and identifying the framework used for voice calling (PJSIP/webrtc/Liblinphone). Utilized TDD to improve product quality for the existing native code. Identifying the framework which can auto-generate Java wrappers for the native code namely Swig Involved in ensuring that the native code was used in both the iPhone and Android versions of the applications so as to improve maintainability

Project Title	Design and development of the Nano SDK
Duration	Oct'14 – Feb'15
Team Size	7
Environment	C, C++, Java on Windows and Linux, C# on Windows
Tools Used	Visual Studio 2008, Valgrind, SVN (SCM), Jira, Jenkins(CI/CD)
Synopsis	The SDK was to allow third party integrators to interact and control some features of the firmware which was a video camera. SDK had to be called from C, C++, Java and C# applications and sample applications provided to show to use the same
Deliverables	Task allocation, tracking and providing weekly status reports. Risk analysis and risk mitigation plans Daily standup meeting with client. Bug tracking, planning and releases. Designed and developed the SDK using TDD to ensure compatibility with C, C++, Java and C# applications and across both Windows and Linux OS. Using OpenCV for video streaming. Video processing. Implementing algorithms for iris detection. Compared and selected the following platform independent frameworks namely Apache thrift, Boost and POCO. Developed the critical functionality of camera detection using Bonjour, storing data in local db and uploading to firmware, building the infrastructure for use by the rest of the team Firmware development for the SDK functionality. Setting up and configuring Jenkins for CI/CD on Windows and Linux

Company Name	**Intuit India Product Dev Center**
Designation	**Lead Software Engineer**
Project Title	Payroll feature in QB
Duration	July'12 – Sep'14
Team Size	10
Environment	C++, MFC, COM, C# and WPF (XAML) based UI on Windows
Tools Used	Visual Studio.NET 2010, Fiddler, WinDbg, Perforce (SCM), Jira
Synopsis	The payroll feature allows the owner to create pay checks, pay associated taxes and file tax forms. Additional features include sending data to cloud.
Deliverables	Looking at VOC (Voice of Customer), CP3 and the community site to understand customer needs. Using control and data templates in XAML to implement the UI. As an Agile coach, my contributions include facilitating agile adoption by mentoring during all phases including but not limited to: Estimation, sprint planning, retrospective, etc. Generate effort estimate and identify solution based on the requirements. Individual Contributor working on RTB (Run The Business) issues. Own the compliance feature and work with the forms team to ensure that the tax forms get the correct data and also to help in filing the associated forms. Designed the new payroll center module and provided the LoE for the same. A level of complexity is that the code base contains 24 million lines of code. Around half the time taken to fix a defect is used to search for the code and the rest split between manual unit tests and reviews. Directly interact with PMs to get the requirements and provide inputs on technical feasibility. Designed and implemented critical changes.

Project Title	QB
Duration	Dec 2009 - Jul 2012
Team Size	10
Environment	C++, MFC, COM, C# and WPF (XAML) based UI on Windows
Tools Used	Visual Studio.NET 2010, Fiddler, WinDbg, Perforce (SCM), Jira
Synopsis	The application allows SBOs to handle book-keeping.
Deliverables	Estimation, designing and implementation of features, bug fixing, test plan review and unit testing. Individual contributor working on reports and UI refresh. Prototyped a feature within a week and the feature was greenlit. As of now the feature is generating $10k. For 1 year I lead a team of 5 contractors working on IPD. Our work generated revenues of $500k. Directly interact with PMs to get the requirements and provide inputs on technical feasibility. Also design and implement the critical changes. Leading the developers by providing guidance and resolving dependencies with other teams

Company Name	**iPass India Pvt Ltd**
Designation	**Technical Lead**
Project Title	iPC
Duration	Aug 2008 - Nov2009
Team Size	10 consultants (Till Mar 2009), 5 (Till Nov 2009)
Environment	C++, MFC, COM on Windows
Tools Used	Visual Studio.NET 2005, Wireshark, WinDbg, Perforce (SCM), Bugzilla
Synopsis	Enhancements and bug fixes in the iPass Connect application. The application allows users to connect to their office network using methods like Dial, Wifi, Mobile Broadband.
Deliverables	Volunteered and took up projects involving creation of installer packages. Led a team of 10 contractors located in Hyderabad, ensuring that the bug fixes and features were implemented correctly. Analyzing the PRDs and identifying the solution and LoE (level of effort) for the same

Company Name	**Wipro Technologies**
Designation	**Project Manager**
Project Title	Rose and Neo
Duration	Apr2007 - Aug2008
Team Size	8 comprising of 4 (Firmware) + 4 (Application)
Environment	C++, MFC on Windows
Tools Used	Rational Rose, SQL Server, Socket, Visual Studio.NET 2003/2005, MPP
Synopsis	The Rose sub-project involved localizing the existing 6 Windows based video application for FIGS
Deliverables	Lead a team of 7 resources and handling metrics calculations for schedule, effort deviation, review-rework efforts, etc. Generate effort estimate and identify solution based on the requirements. Part of the work involved ensuring that we received additional funding from the client for the current project and also the next project. The challenges in this project included:

- ✓ Understanding and meeting the expectations of Japanese customer while ensuring that the quality and schedule were met
- ✓ Understanding the features of E-Cube (internal task tracking tool) and practices followed while ensuring that the work gets done on time

Company Name	**Honeywell Technology Solutions Lab**
Designation	**Principal Engineer**
Project Title	Belfast
Duration	Nov2005 - Mar2007
Team Size	8 comprising of 5 (DSP) + 3 (Application)
Environment	C++, COM, C# on Windows
Tools Used	DevPartner, Rational Clearcase, Rational Rose, SQL Server, socket, Visual Studio.NET 2002
Synopsis	Provide support for legacy firmware which supported digital cameras and also support the new firmware which would support analog cameras.

Deliverables	Generate effort estimate and identify solution based on the requirements. Module lead for the software team:

- ✓ Supporting interaction between C# (UI), Business logic (COM as the main layer and support libraries in MFC) and communication layer (MFC).
- ✓ Synchronizing mechanisms like events and critical sections have been used to maintain the states of the connected streams
- ✓ Used Intel IPP libraries to decompress the images received from the firmware

Project Title	Whistler
Duration	Jun2005 - Nov2005
Team Size	4 comprising of 3 (DSP) + 1 (Application)
Environment	C++, COM on Windows
Tools Used	DevPartner, Rational Clearcase, socket, Visual Studio.NET 2002
Synopsis	Receive MPEG4 compressed images being streamed on the network using the RTP/RTSP protocols and de-compress the MPEG4 images to bitmaps.
Deliverables	MPEG4 was chosen as it provided the best performance. The load on the network was reduced as most of the frames would be reference frames. The challenges included: Understanding the RTP/RTSP protocols and MPEG 4.

- ✓ Handling the socket issues where the DSP would not receive the requests of the application, latency issues, etc.
- ✓ Evaluated the SLP and Bonjour device discovery protocols. A QFD was done to decide on the protocol that would suit our requirements.

Project Title	AVPS
Duration	Feb2004 - Jun2005
Team Size	9 comprising of 5 (Research) + 4 (development)
Environment	C++, MFC, COM on Windows
Tools Used	DevPartner, VSS, SQL Server, Visual Studio.NET 2002
Synopsis	Optimize the algorithm for classifying moving objects.
Deliverables	The challenge here was to understand the algorithms being implemented by the research team and write code which would provide the best performance while keeping the false positives to a minimu. The architecture was designed so that we would have a component called the AVPS Manager who would be the main interface between the modules and the client interacting the modules. We used DevPartner to figure out performance bottlenecks, detect errors like memory issues & code coverage

Company Name	**Celstream Technologies Pvt Ltd**
Designation	**Software Engineer**
Project Title	Mango
Duration	Dec2002 - Feb2004
Team Size	24 comprising of 9 (offsite) + 15 (onsite)
Environment	C++, COM on Windows
Tools Used	Rational Clearcase, Rational Rose and Visual Studio 6
Synopsis	Create a cleaner and COM based version of the support for the Odetics protocol.
Deliverables	Rational Rose was used, to create the System Sequence diagrams for the functionality to be handled. This was a multithreaded application and we are using synchronizing methods like Critical Sections, Events.

Project Title	Protocol Objects
Duration	Oct2001 - Dec2002
Team Size	3
Environment	MFC on Windows
Tools Used	Rational Clearcase, Rational Rose and Visual Studio 6
Synopsis	We upgraded the support for the Odetics protocol.

Deliverables	The existing code was supporting multiple protocols, which made it slow and buggy. The code had also been modified by a lot of users. Modified the existing Odetics commands to provide greater ease to the users of our application, support has been added for Fiber channel commands in the Odetics Protocol (ADSP protocol)

Project Title	Maintenance of products
Duration	Apr2001 - Oct2001
Team Size	12 comprising of 2 (offsite) & 10 (onsite)
Environment	MFC on Windows
Tools Used	Rational Clearcase, Rational Rose and Visual Studio 6
Synopsis	Bug fixing of the products
Deliverables	One product is a device used to record and play video clips. The other product is used to keep the sync between two machines

Company Name	**Trigent Software Pvt Ltd**
Designation	**Software Engineer**

Project Title	Alpha (Internal Project)
Duration	Jan2001 - Apr2001
Team Size	15
Environment	JSP and Java beans,
Tools Used	Tomcat server(v 3.2.1), Java
Synopsis	Automate the working of Allocation, Travel and Visa cells
Deliverables	Stored procedures were used to make the queries, so that we can reduce the overhead of executing each sql query from the bean and awaiting the return value.

Project Title	ASR (Automatic Speech Recognition)
Duration	Nov2000 - Dec2000
Team Size	3
Environment	MFC on Windows
Tools Used	Visual Studio 6
Synopsis	Allow the users to evaluate their manner of pronunciation
Deliverables	Data transfer between the browser and the VC++ code was done using JavaScript and a Java class, as JavaScript cant access the users system.

Company Name	**Foresee Information Systems Pvt Ltd**
Designation	**Software Engineer**

Project Title	Developing samples to be placed on a website similar to CodeGuru
Duration	Oct 1999 – Sep 2000
Team Size	14
Environment	Win32 on Windows
Tools Used	VC++ 5.0
Synopsis	Programmatically display the response of each function
Deliverables	Pipes, cryptography, file installation, file decompression list View, event logging and synchronization functions including generation of keys, etc