RAKESH KUMBHASHI

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Staff Engineer - Technical Leader

An innovative problem solver that thrives in fast-paced, collaborative team environments. Cross-functional team lead with fourteen-year experience focused on developing mission critical automation software, directly leading to wide ranging cost savings by increasing quality and line health. Assess new generation process requirements, architect, design and deliver automation solutions to high volume Intel manufacturing facilities. Formulate product strategy and roadmap to align with business requirements and get it ratified through management review committees. Keen interest in exploring new technologies, evaluating system performance and driving system optimization.

Skills

Languages	C# and .NET technologies, C++/VC++, Python, Powershell scripting
APIs	DCOM/COM+, WCF, REST API, Cross platform serialization (MessagePack, Apache Thrift, Google RPC/Protobuf), Python Flask and Tornado web services
UI	Win32, .NET Winforms, WPF
Databases	SQL, Oracle, Mongo DB, Redis
Log aggregation/ Monitoring	Elastic Stack Search / Kibana, SCOM 2012
Source Control	VSS, TFS, Git

External Publications/Conferences

- Winner of consecutive department level Code-a-thons (2018 and 2019) for designing machine learning proof of concept for predicting factory out of control events based on historical statistical process control data & Elastic search data aggregation.
- Presented at Intel Manufacturing Excellence Conference (IMEC) 2018 on “Improving TCB Yields using Data Feed Forward & flexible PCS computation pipeline”.
- Intel Invention Disclosure Form (IDF) granted by Patent Innovation committee for proposal on Advanced Process control in 2016.
- Presented at IMEC 2010 on “Next gen Fault Detection Control for ATM through advanced PCS computation pipeline”.
- Published paper on “Pathfinding on Automation Solutions to Enable Effective Online PCS at Test” in Intel Assembly Test Technology Journal (IATTJ), vol 11, 2008
- Machine Learning course certified by Coursera (http://bit.ly/2mQrQUs)

Experience

Intel Corporation, Assembly Test Technology Development Group

Staff Engineer ***2017 - Present***

- Develop domain roadmap and strategy for multiple products and get it ratified in executive sync forums.
- Screening and interviewing senior engineers for department hiring activities.
- Python Compute Architecture:
  - Led pathfinding efforts in benchmarking multiple technologies towards delivering Python based compute framework and enabling MATLAB to Python conversion.

- Evaluated and benchmarked multiple cross-platform serialization such as JSON, BSON, MessagePack, Google Protobuf, Apache Thrift along with different communication protocols such as Apache thrift, GoogleRPC, HTTP and arrived at highly performance cross-platform framework.
- Influence senior management and pathfinding committee resulting in adoption of this framework for Python cross framework standard
- Resulted in increased factory module uptime and improved performance for each unit level execution by 30%.

- Designed and developed a unified Regression Test framework for multiple heterogenous products. Several innovative concepts such as central configuration engine to store test configuration and data sets – enabling configure once, run anywhere concept. This enabled saving of 200-man hour for each release cycle and 5 man-hours for each factory systems validation activity.
- Delivered internal brown bag / technical sharing sessions within department on various technical topics.
- Actively mentor junior engineers to encourage and engage our technical workforce and promote inclusion.

Product Owner/ Senior Software Engineer ***2012 - 2016***

- Point of contact from product domain for all new requests handling 3 enterprise products.
- Led and developed client-side Process Control framework to deliver near real time process control processing execution on factory clients – involving Mongo DB based storage, dynamic assembly load for .NET assemblies and reflection framework.
- Delivered excellent internal wiki documentation for the domain and won the department award for best documented product Wiki (2016). Mentored other teams on best wiki practices.
- Develop scalability, reliability test harness for all products and maintain product performance baseline.

Tech Lead ***2009 - 2012***

- Led a team of 4 engineers to deliver Statistical process control solution for manufacturing Test tools enabling 10X performance improvement in decision time on the factory floor. The same was showcased as publication in ***Intel Assembly Test Technology Journal*** 2010.
- Develop and deliver solutions to integrate Unit Level Process control across Intel ATM factories across hundreds of tool controllers in high volume environment enabling unit level fault detection capabilities.
- Designed a WCF based framework to support real time tool data streaming from across 400 factory clients into Unit Level process control system - enabling real time fault detection capability for intel factories. This framework was the basis for fault detection deployment into several areas in factory leading to millions of dollars in savings over the years.
- Developed design for integration of MATLAB based runtime models into Unit level execution framework.
- Led architecture definition, design and development of Advanced process control framework to enable real time tool parameter recommendation engine and tool re-targeting thereby achieving optimum process capability and increased process yield. For specific implementation, this was a granted Intel Disclosure Form (IDF) by patent / innovation committee.

Software Engineer ***2005 - 2008***

- Deliver product enhancements and sustenance for Statistical process control (SPC) mission critical product used at over 1500 factory clients across Intel ATM factories.
- Delivered product enhancements enabling critical factory requests that reduced modeling effort for support team by 30% and reduce support tickets by 40%.
- Deliver product training to factory support personnel and engineers. Created Intel University web based training course with certification modules.

Education

Bachelor of Engineering, Information Technology, National Institute of Technology Karnataka (NITK) Surathkal
March 2005, Average 83.8%
Pre-University Board, PU Board Karnataka
2001, 90.66% (95th rank in CET exams)