Shrirang (Arvind) K. Karandikar

+91 725 900 7245 shrirang@karandikar.org http://shrirang.karandikar.org

Experience

April 2018 – present
The Enki Ecosystem
Founder & Partner

I am currently developing a platform for cross-disciplinary collaborations in the digitalization space. *Activities* include consulting, training and incubation on digitalization *technologies* such as AI, Blockchain, Robotics and IoT for *participants* who are domain experts, technology experts, corporations large and small, and startups

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November 2012 – April 2018
Shell India Markets Pvt. Ltd.
General Manager, Computational Technology
Team Lead, Advanced Computer Sciences

I led a global team evaluating new technologies and developments in existing computational methods (machine learning, cloud, blockchain, HPC) and applying these within Shell. I interfaced with stakeholders across multiple business units and geographies

My responsibilities included setting strategy, capability build, team and stakeholder management, budget allocation and management, and value-based delivery

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June 2007 – June 2012
Computational Research Labs, India
Distinguished Scientist and Group Head, Technology Innovation
Team Lead, Performance Analysis and Optimization
Member of Technical Staff, Application optimization

I directed all research in hardware, software and system design, with focus on high performance computing, parallel algorithms and efficient implementations. I also interfaced with external customers and supported commercial activities

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January 2005 – May 2007
IBM Austin Research Labs
Research Staff Member

I was the principal developer of EVE (Electrical Violation Eliminator), an approach for electrical correction that was (at that time) more effective, significantly faster and used less overhead than previous methods. My work influenced related areas such as buffering and gate sizing, and drove further development of methodology flows in PDS, IBM's principal tool for physical design. This work resulted in 5 patents

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January 1997 – September 1999
Intel Corp.
Component Design Engineer

I worked on the design and development of SHARK-FG, a switch level fault simulator. My contribution involved parallelizing the tool, enabling the simulation of multi-million transistor designs (which was not possible on single machines at the time). This tool was used for evaluating test vectors for the Itanium microprocessor, significantly reducing tester time.

I worked on the design and development of AutoCov, a genetic-programming based tool for improving test coverage. My contributions involved determining the "fitness" of current tests, and directing the generation of new tests. AutoCov was used in developing the test suite for the Pentium-4 series of microprocessors

September 1994 – August 1995 Senior Sales Engineer,
NIIT Ltd.

I was the marketing lead for Mentor Graphics(EDA) and Arc/Info(GIS) software packages in India. My work involved educating users on the need for automation and the quality of our solution package. This was at a time when the computer revolution was yet to take off in India, and the marked for EDA and GIS software had to be created from scratch

Education

Doctor of Philosophy, Electrical Engineering
Minors: Mathematics, Computer Science
Thesis: Synthesis and Performance Prediction of VLSI Designs
University of Minnesota
2004

Master of Science, Electrical Engineering
Thesis: CAD Algorithms for VLSI Physical Design
Clarkson University
1996

Bachelor of Engineering, Electronics and Telecommunications
University of Pune
1994

Diploma in Advanced Computing
Advanced Computing Training School, C-DAC
1994

Publications

Various conference, journal and workshop publications and patents, for a partial list please see http://shrirang.karandikar.org/pubs/pubs.html

Regular speaker at internal and external forums