Shashank Shekhar

EDUCATION

VANDERBILT UNIVERSITY
PhD in Computer Science
Expected May 2017 | Nashville, TN
Cum. GPA: 4.0/4.0

MANIPAL UNIVERSITY
BE in Computer Science
2006 | Manipal, India
Cum. GPA: 3.0 / 4.0

COURSEWORK

GRADUATE
Big Data, Distributed Systems
Intermediate Software Design
Cloud Computing
Model Integrated Computing
Computational Economics
Design and Analysis of Algorithms
Concurrent Java Network Programming
in Android

SKILLS

PROGRAMMING
Java • Python • C++ • JavaScript • Shell Scripting
Cloud & Big Data:
OpenNebula• Xen• KVM• Docker• LXC• Hadoop• Spark• Storm
Database Technologies:
Teradata• Postgres• MongoDB• Cassandra• HBase• Hibernate
Application/Web Servers:
Tomcat• CherryPy• Nginx• IIS• Oracle Weblogic
Frameworks & Tools:
Android SDK• ACE• TAO•Eclipse IDE• Microsoft Visual Studio• SVN• Rational Clearcase• Git• Phabricator•JIRA• Crucible • Axis2

PATENTS

- Publication Services, filed in October, 2009.
- Master Data Management Versioning, filed in September, 2011.
- Master Data Management Database Asset as a Web Service, filed in October, 2009.

EXPERIENCE

AVAYA LABS | Summer Research Intern
Jun 2015 - Aug 2015 | Basking Ridge, NJ
- Social media analytics with focus on customer service channels

HEWLETT PACKARD | System Software Engineer II
Jun 2010 - Aug 2012 | Bangalore, India

- Design and development of HP P6000 Performance Advisor and Performance Data Collector for HP Enterprise Virtual Array using Java, C/C++, and web based technologies

TERADATA | Senior Software Engineer
Oct 2006 - Jun 2010 | Bangalore, India

- Design and development of Teradata Master Data Management (MDM) using Java and XML based technologies from releases 1.0 to 3.0.1

RED HAT | Associate Web Developer
Jun 2006 - Oct 2006 | Pune, India

- Development of Red Hat's official website: www.redhat.com

RESEARCH

INSTITUTE FOR SOFTWARE INTEGRATED SYSTEMS | Research Assistant
Jan 2013 – Present | Nashville, TN
Working on two projects with research focus on cloud computing, big data, distributed event stream processing systems and fault tolerance. Recent research:

- C^2SuMo: Development of a cloud based distributed educational system for high school students using SUMO traffic simulator, python, mongodb and web technologies. The research involves performance optimization and development of fault tolerant solution specific to simulators.
- DDDAS: Developing dynamic data driven application systems. Components include cloud simulations, stream data processing and big data analytics. Current research focuses on developing scheduling algorithms for a docker container based simulation as a service.
- A class project for identifying relationship between failures and system traces by analyzing Google cluster trace using Apache Spark framework.
- Completed a survey of distributed event stream systems while identifying the research challenges and solutions for fault tolerance.

Key Publications

[1] S. Shekhar, H. Abdel-Aziz, M. Walker, et al. A simulation as a service cloud middleware. *annals of telecommunications - annales des télécommunications*, pages 1–16, 2015.

[2] S. Shekhar, F. Caglar, A. Dukeman, et al. An Evaluation of a Collaborative STEM Education Framework for High and Middle School Students. In *Poster Paper at 121st ASEE Annual Conference, K-12 and Pre-Engineering Track*. ASEE, Indianapolis, IN, USA, June 2014.

[3] K. An, S. Shekhar, F. Caglar, et al. A cloud middleware for assuring performance and high availability of soft real-time applications. *Journal of Systems Architecture*, 60(9):757–769, 2014.

[4] F. Caglar, S. Shekhar, and A. Gokhale. iplace: An intelligent and tunable power-and performance-aware virtual machine placement technique for cloud-based real-time applications. In *Object/Component/Service-Oriented Real-Time Distributed Computing (ISORC), 2014 IEEE 17th International Symposium on*, pages 48–55. IEEE, 2014.

[5] S. Shekhar, F. Caglar, K. An, et al. A model-driven approach for price/performance tradeoffs in cloud-based mapreduce application deployment. In *MDHPCL@ MoDELS*, pages 37–42, 2013.