

DANUSHKA MENIKKUMBURA

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EDUCATION

Purdue University, West Lafayette, IN Expected May 2021
Ph.D. in Computer Science

University of Moratuwa, Sri Lanka Aug 2003
B.Sc. in Computer Science & Engineering
GPA: 3.86/4.00
Rank: 15 of 48

SKILLS

Programming (over 1000 lines of code)
C, C++, Java, Python, Linux kernel development, DPDK, SOA

TEACHING

Graduate Teaching Assistant Fall 2014 – Fall 2016

- Designed and implemented course projects including sample solutions, handouts, and automated grading schemes for a highly competitive course that usually has the highest student enrollment (~600)
- Graded exams, held weekly office hours and lab sessions, actively provided help on online student portals
- Conducted regular meetings with head professor, course coordinator, and other TAs

MISCELLANEOUS

Apache Axis2
Project Management Committee member and long-time committer for Apache Axis2 open source Web services framework project

Apache Airavata
Long-time contributor and committer for Apache Airavata science gateway project, which is led by the *Science Gateway Research Group* at Indiana University, USA

Google Summer of Code
Successfully completed a GSoC project in 2013. The requirement was to have support for Advanced Message Queuing Protocol (AMQP) in the notification manager of Apache Airavata

REFERENCES

Tom Edsall
Emeritus Advisor/Fellow & Former CTO (Datacenter Networking) at Cisco
edsall@cisco.com
(I collaborate with Tom on a research project on congestion control)

Prof. Patrick Eugster
Department of Computer Science
Purdue University
p@cs.purdue.edu
(Prof. Patrick is my advisor)

EXPERIENCE

Cisco Systems, San Jose, CA May 2017 – Dec 2017
Software Engineering Intern

- Worked on the Cisco network assurance engine product (Candid)
- Implemented APIs to collect required data from VMware vCenter and Citrix NetScaler load balancer
- Honored to receive an award recognizing my contribution to the project during the internship. It is an award usually fulltime employees at Cisco are considered for.

Millennium Information Technologies, Sri Lanka Jul 2011 – Jul 2014
Technical Lead

- Collaborated with the product Architect designing the overall architecture of a stock market data dissemination system
- The product is currently used in leading stock markets including London Stock Exchange and Milan Stock Exchange
- Contributed from the product inception to go-live playing different roles including development lead

WSO2 Inc., Sri Lanka Sep 2007 – Jun 2011
Senior Technical Lead

- Designed and implemented a Ruby binding for Apache Axis2 Web services framework
- Designed and developed a message broker that supports different messaging protocols including JMS, SOAP, AMQP, etc
- Technical product manager for two SOA frameworks developed using C++ and Java

Millennium Information Technologies, Sri Lanka Aug 2003 – Aug 2007
Senior Software Engineer

- Development lead for a mediation engine developed to process international telecommunication traffic going through Sri Lanka Telecom, the largest fixed-line telecommunication operator in Sri Lanka

RESEARCH

Projects

- Congestion control for RDMA datacenter networks (in collaboration with Cisco)
- Preventing head-of-line blocking in lossless datacenter networks
- Predictive congestion control for datacenter networks (brainstorming)

Publications

Kogan, Kirill, Danushka Menikkumbura, Gustavo Petri, Youngtae Noh, Sergey Nikolenko, and Patrick Eugster. "BASEL (buffer management specification language)." In *2016 ACM/IEEE Symposium on Architectures for Networking and Communications Systems (ANCS)*, pp. 69-74. IEEE, 2016