Anil kumar Yelam

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EDUCATION	**University of California San Diego**, La Jolla, California, USA	
	Ph.D. in Systems and Networking, Department of Computer Science	Sep 2018–Present
	Indian Institute of Technology Kharagpur, West Bengal, India	
	B.Tech. (Hons.), Department of Computer Science and Engineering	Jul 2010–May 2014
	Cumulative Grade Point Average (CGPA) of **9.59/10** (top of the class)	

RESEARCH EXPERIENCE

Doctoral Student, University of California San Diego — Aug 2017–Present
Exploring data center networking research — Prof. Alex Snoeren
Currently exploring data center networking research at UCSD SysNet lab.

Bachelor Thesis Project, IIT Kharagpur — Jul 2013–May 2014
Minimum delay event delivery in vehicular networks — Prof. Arobinda Gupta
Developed optimal heuristics for minimum delay event placement problem in vehicular networks, in a mobile publish-subscribe setup where events subscribed to by vehicles moving through a city are delivered through road-side units. Proposed offline and online heuristics for this bi-objective optimization problem of minimizing average delay in event delivery while maximizing the number of vehicles satisfied, and evaluated the performance of these heuristics over Tokyo city traffic patterns.

WORK EXPERIENCE

Software Engineer — Dec 2014–May 2017
Software Engineer 2 — Jun 2017–Aug 2018
Database Systems, Microsoft, Serbia & Seattle
Was part of SQL Azure team that offers SQL Server Database on PaaS and IaaS platforms on Microsoft Azure. Developed and maintained services that support range of features for Azure SQL Database, like automated performance optimizations for user's database by analyzing its telemetry, through which I've gained immense expertise at building cloud-scale services. Also worked on control plane framework that supports provisioning and management of SQL Server VMs and SQL Server Availability Groups (SQL HA solutions) in Azure.

INTERNSHIPS

Summer Internship, Amazon, India — May 2013–Jul 2013
Log retriever software in a distributed system — Mr. Aditya Patel
Developed a framework to fetch relevant logs from log files stored on tens of hosts in a large scale system to a web page. Developed an efficient algorithm for parsing large zipped log files and a web server that efficiently balances the requests.

Summer project, IIT Kharagpur, India — May 2012–Jun 2012
Tracking players in a soccer video — Prof. Partha Pratim Das
Worked on various color segmentation algorithms and implemented a player tracking algorithm based on position prediction in successive frames using Image Processing Toolkit in MATLAB.

NOTABLE ACHIEVEMENTS

Received Institute Silver Medal for being adjudged best student in order of merit in Computer Science and Engineering at IIT Kharagpur, class of 2014.

Received Bigyan Sinha Memorial Prize for being adjudged second best in the Institute in order of merit at IIT Kharagpur, 2014.

Was promoted twice in less than three years for exceptional performance in Database Systems team at Microsoft.

Secured 491th rank amongst more than 450,000 students in IIT-JEE 2010 and 337th rank amongst more than 1,000,000 students in AIEEE 2010.

Received a patent, as a team, for automated database index recommendations for performance improvements in Azure SQL Database, 2015.

Qualified among Top 10% in National Standard Examination in Physics and National Standard Examination in Chemistry conducted by Indian Association of Physics Teachers in 12th grade.

KEY COURSES

Graduate Level: Operating Systems, Topics in Embedded Systems

Undergraduate Level: Algorithms, Advanced Graph Theory, Compilers, Computer Networks, Computer Architecture, Database Management and Systems, Distributed Systems, Formal Languages, Foundations of Cryptography, Information Retrieval, Machine Learning, Operating Systems, Speech and Natural Language Processing

KEY
PROJECTS

Hosting SQL Server Availability Groups as a resource on Microsoft Azure, 2016
Within a team of four, developed a framework that offers SQL Server Availability Groups on Microsoft Azure. Includes building highly available services deployed to all Azure regions that constantly support customer actions of provisioning and management of these resources.

Automated performance optimizations in Azure SQL Database, 2015
Developed services that provide end-to-end support for automating recommendations for performance optimization of user databases on Azure Portal, from running models on telemetry that churn these recommendations to exposing them to user to applying these optimizations on the databases.

Automated torn image mosaicking software, 2014
Implemented an algorithm to stitch different torn pieces of a paper provided as separate inputs into single image with correctly aligned pieces using feature extraction and matching of edges of torn images as a part of OpenSoft, an inter-house competition at IIT Kharagpur. The software won gold for precision and quickness of the results.

RISC Processor, 2013
Designed and implemented a RISC processor in Xilinx for a given 32-bit word length Instruction Set Architecture (ISA) which was uploaded on an FPGA and could successfully execute a program written in binary using the given ISA, as a part of Computer Organization and Architecture laboratory course

Compiler for a 'C' like Programming Language, 2012
Designed and built a compiler for a 'C' like language using YACC and Bison which converted code in the given language to 3 address code that could be successfully executed on a linux machine, as a part of Compilers laboratory course

REFERENCES

Prof. Alex Snoeren, University of California San Diego   email: *snoeren@cs.ucsd.edu*
Department of Computer Science

Prof. Arobinda Gupta, IIT Kharagpur   email: *agupta@cse.iitkgp.ernet.in*
Department of Computer Science and Engineering