Rajdeep Das

Personal Information

PhD Student
UC San Diego
La Jolla, CA (USA)

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Research Interests

Datacenter Networking, Wireless Networking, Real-Time Streaming

Education

PhD / Computer Science and Engineering
University of California San Diego 2017 - present

M.Tech / Computer Science and Engineering
Indian Institute of Technology Kanpur 2013 - 2015

B.Tech / Information Technology
West Bengal University of Technology 2009 - 2013

High School / Indian School Certificate
Council for the Indian School Certificate Examinations 2009

Publications

Junchen Jiang, Rajdeep Das, Ganesh Ananthanarayanan, Philip A. Chou, Venkata Padmanabhan, Vyas Sekar, Esbjorn Dominique, Marcin Goliszewski, Dalibor Kukoleca, Renat Vafin, Hui Zhang. "VIA: Improving Internet Telephony Call Quality Using Predictive Relay Selection". ACM SIGCOMM, 2016

Rajdeep Das, Nimantha Baranasuriya, Venkat Padmanabhan, Christoffer Rodbro, Seth Gilbert. "Informed Bandwidth Adaptation in Wi-Fi Networks using Ping-Pair". ACM CoNext, 2017

Sagar Parihar, Ziyaan Dadachanji, Praveen Kumar Singh, Rajdeep Das, Amey Karkare, Arnab Bhattacharya. "Automatic Grading and Feedback using Program Repair for Introductory Programming Courses". ACM ITICSE, 2017

Professional Experience

Microsoft Research India / Research Fellow Bangalore, August 2015 - August 2017
Mobility, Networks and Systems Research Group

Internet Performance Map & Predictive Relaying - A data structure / visualization of the internet which could be used by real-time streaming applications like Skype to predict the quality of future calls. Leveraged large amounts of telemetry data from Skype and Bing to devise a method of using predictive relaying to improve call quality.

Kwikr - Fast bandwidth adaptation using WiFi hints. We developed a suite of detectors for congestion, handoffs and link-strength-change at the WiFi access point. The congestion detector involved our novel ping-pair technique which can be used to estimate the queueing delay at the wireless access point. We integrated Kwikr into Skype for Android consumer production client.

Multipath in Real-Time Streaming - Using multiple paths over different network interfaces or different WAN paths to improve performance of real-time streaming applications.

PriceWaterhouseCoopers / Intern Kolkata, June 2012 - August 2012
Primary responsibility involved assessing web applications for security vulnerabilities and recommending fixes for them. The security vulnerabilities that I tested for included attacks such as cross-site-scripting, injection, session hijacking, sensitive data leakage, cross-site-request-forgery, insecure direct object references and unvalidated forwards/redirects.

Master's Thesis

A Tutoring System for Introductory Programming
Developed a software system for teaching introductory programming, now known as Prutor. Prutor is a cloud based system with a web interface that students can use to solve programming problems and get feedback for syntactic/semantic errors. Prutor can trace the evolution of student programs and help in better interactivity between students and tutors/TAs. Universities like IIT Kanpur, IIT Bombay and IIT Goa have used Prutor to conduct introductory programming courses.

Awards & Achievements

Best Software Award 2015
Indian Institute of Technology Kanpur

School Topper 2003, 2007, 2008
National Science Olympiad

Co-Curricular Activities

Google Dev Fest / Runner Up September 2013
WishEmAll: Created an app that automatically wishes Facebook friends on their birthdays.

Yahoo! Hack U / Honourable Mention August 2013
Gyaanometer: Our hack was a user rating system for Yahoo answers, where every user would be given a rating according to her past activity. Our hack was ranked in the top 7 hacks.

Microsoft Code.Fun.Do / Participated January 2013
Botomatic: We created an app which would connect to Facebook on behalf of a user and chat with her friends. The app used Pandorabots AI to converse with the users' friends.