Gunaprasaad Jeganathan

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INTERESTS

Data Management, Programming Languages, Distributed Systems

EDUCATION

University of Washington, Seattle
Ph.D. in CS, 2016-
Advisors: Dan Suciu, Alvin Cheung

Indian Institute of Technology Bombay
Bachelors in CS, 2011-15
Advisor: S. Sudarshan

EXPERIENCE

University of Washington, Seattle | *Graduate Student Researcher* Sep 2016 onwards
Developed a novel scheme that improves transaction processing throughput by 2× on average over traditional concurrency control protocols for high contention workloads.

Microsoft Research, Redmond | *Research Intern* Summer 2017
Designed one of the fastest open-source key-value store (FASTER) that is orders of magnitude faster than state-of-the-art and developed a new semantic checkpointing consistency that allows for almost zero-overhead concurrent checkpointing of a database. [website]

Microsoft Research India, Bangalore | *Research Assistant* Aug 2015 - Sep 2016
Designed a realtime deterministic stream processing engine for multicores. Involved designing non-blocking concurrent data structures and devloping novel dynamic scheduling heuristics. [paper]

IIT Bombay, Mumbai | *Undergraduate Student Researcher* Aug 2014 - June 2015
Designed and implemented an optimized version of on-disk index structure for bulk primary-key inserts based upon Buffer Trees (Lars Arge, 1995). [thesis]

Adobe Advanced Technologies Lab, Bangalore | *Research Intern* Summer 2014
Developed a novel method of personalizing email campaign using the linguistic style of target segment and proved its usefulness using crowd-sourced experiments. [paper]

SELECTED PUBLICATIONS

G. Prasaad, A. Cheung, D. Suciu.
Handling High Contention OLTP Workloads using Fast Dynamic Partitioning.
Under Submission.

G. Prasaad, B. Chandramouli, D. Kossmann.
Concurrent Prefix Recovery: Performing CPR on a Database.
To appear in SIGMOD 2019.

G. Prasaad, G. Ramalingam, K. Rajan.
Scaling Ordered Stream Processing on Shared-Memory Multicores.
CoRR abs/1803.11328 2018.

B. Chandramouli, G. Prasaad, D. Kossmann, J. Levandoski, J. Hunter, M. Barnett.
FASTER: An Embedded Concurrent Key-Value Store for State Management.
VLDB 2018 (Demo).

B. Chandramouli, G. Prasaad, D. Kossmann, J. Levandoski, J. Hunter, M. Barnett.
FASTER: A Concurrent Key-Value Store with In-Place Update.
SIGMOD 2018.

R. S. Roy, A. Padmakumar, G. P. Jeganathan, and P. Kumaraguru.
Automated Linguistic Personalization of Targeted Marketing Messages Mining User-Generated Text on Social Media.
CICLing 2015. **[Best Paper Award]**

PATENTS

B. Chandramouli, G. Prasaad, D. Kossmann, J. Levandoski, J. Hunter, M. Barnett.
FASTER Key-Value Store System.
USPTO Appl. No. 15/917,352.

R. S. Roy, G. P. Jeganathan, A. Padmakumar, and P. Kumaraguru.
Linguistic Personalization of Messages for Targeted Campaigns.
USPTO App No. 14/566,181.

HONORS

- Awarded CSE Research Fellowship, University of Washington, 2016
- Recipient of Narotam Sheksharia Scholarship for Undergraduate Studies, 2012
- Recipient of the KVPY Scholarship by the Government of India (2011), will All India Rank 13
- Certificate of Merit in CS (2011); Awarded to top 1% students by CBSE (India)
- All India Rank 326 in IIT-JEE 2011, among 500,000 candidates

TEACHING

Intro to CS (CS101), IIT Bombay | *Head Teaching Assistant* 2014-15

Undergrad Programming Languages (CS302), IIT Bombay | *Teaching Assistant* Spring 2015

LEADERSHIP

Seminar on Databases and Blockchains [website] Winter 2018
Organized a series of 10 talks by academics and practitioners on blockchains and databases.

Deep Learning Meets Databases Seminar [website] Fall 2017
Curated topics and papers to guide a quarter-long discussion on deep learning and databases.

Mentor, Department Academic Mentorship Programme [website] 2014-15
Mentored a group of 14 junior students on academic issues and helped cope up with academic pressure and complete the course of study successfully.

Manager of Programming Club [website] 2013-2014
Organized 22 events comprising talks, workshops and competitions over a wide range of programming topics. Promoted open source contributions through GSOC and participation in programming contests such as ACM-ICPC.