Gunaprasaad Jeganathan

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INTERESTS

Data Management, Programming Languages, Distributed Systems

EDUCATION

University of Washington, Seattle
Masters in CS, 2016-2019
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 - Dec 2019
Developed a novel scheme that improves transaction processing throughput by 2× on average over traditional concurrency control protocols for high contention workloads.

Facebook, Menlo Park | *Intern* Summer 2019
Worked on LogDevice, a distributed logging platform. Designed and implemented strict FIFO ordering protocol in LogDevice to support streaming appends in several failure scenarios.

Google, Mountain View | *Intern* Spring 2019
Worked with the Slicer team that does auto-sharding of data center applications. Designed and developed a distributed signal collection service that is used by Slicer to monitor load and server failures.

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 developing 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]

PUBLICATIONS

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

B. Kenig, P. Mundra, G. Prasaad, B. Salimi, D. Suciu.
Mining Approximate Acyclic Schemes from Relations
To appear in SIGMOD 2020.

G. Prasaad, B. Chandramouli, D. Kossmann.
Concurrent Prefix Recovery: Performing CPR on a Database.
SIGMOD 2019. **[Best of SIGMOD 2019; Invited to ACM TODS]**

G. Prasaad, G. Ramalingam, K. Rajan.
Scaling Ordered Stream Processing on Shared-Memory Multicores.
BIRETE 2019, VLDB Workshop.

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 Data Management, University of Washington | *Graduate Teaching Assistant* Fall 2019

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.