

# Guna Prasaad

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INTERESTS	Distributed Systems, Data Management, Programming Languages	
EDUCATION	<b>University of Washington, Seattle</b> Masters in CS, 2016-2019 Advisors: Dan Suciu, Alvin Cheung	<b>Indian Institute of Technology Bombay</b> Bachelors in CS, 2011-15 Advisor: S. Sudarshan
EXPERIENCE	<p><b>University of Washington, Seattle</b>   <i>Graduate Student Researcher</i> 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.</p> <p><b>Facebook, Menlo Park</b>   <i>Intern</i> Summer 2019 Worked on <a href="#">LogDevice</a>, a distributed logging platform. Designed and implemented strict FIFO ordering protocol in LogDevice to support streaming appends in several failure scenarios.</p> <p><b>Google, Mountain View</b>   <i>Intern</i> Spring 2019 Worked with the <a href="#">Slicer</a> 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.</p> <p><b>Microsoft Research, Redmond</b>   <i>Research Intern</i> 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. <a href="#">[website]</a></p> <p><b>Microsoft Research India, Bangalore</b>   <i>Research Assistant</i> 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. <a href="#">[paper]</a></p> <p><b>IIT Bombay, Mumbai</b>   <i>Undergraduate Student Researcher</i> 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). <a href="#">[thesis]</a></p> <p><b>Adobe Advanced Technologies Lab, Bangalore</b>   <i>Research Intern</i> 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. <a href="#">[paper]</a></p>	
PUBLICATIONS	<p>G. Prasaad, A. Cheung, D. Suciu. Handling High Contention OLTP Workloads using Fast Dynamic Partitioning. <i>To appear in SIGMOD 2020.</i></p> <p>B. Kenig, P. Mundra, G. Prasaad, B. Salimi, D. Suciu. Mining Approximate Acyclic Schemes from Relations <i>To appear in SIGMOD 2020.</i></p> <p>G. Prasaad, B. Chandramouli, D. Kossmann. Concurrent Prefix Recovery: Performing CPR on a Database. <i>SIGMOD 2019. [Best of SIGMOD 2019; Invited to ACM TODS]</i></p> <p>G. Prasaad, G. Ramalingam, K. Rajan. Scaling Ordered Stream Processing on Shared-Memory Multicores. <i>BIRETE 2019, VLDB Workshop.</i></p> <p>B. Chandramouli, G. Prasaad, D. Kossmann, J. Levandoski, J. Hunter, M. Barnett. FASTER: An Embedded Concurrent Key-Value Store for State Management. <i>VLDB 2018 (Demo).</i></p> <p>B. Chandramouli, G. Prasaad, D. Kossmann, J. Levandoski, J. Hunter, M. Barnett. FASTER: A Concurrent Key-Value Store with In-Place Update. <i>SIGMOD 2018.</i></p>	

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), with 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.