Ankur Sharma

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EDUCATION

SAARLAND UNIVERSITY
PH.D.
Oct 2014 - June 2020
Big Data Analytics Group
Saarbruecken, Germany
Grade: Summa Cum Laude

TU DRESDEN
VISITING STUDENT, ZIH
May 2013 - Sept 2014
Dresden, Germany

NIT SIKKIM
B.TECH. IN COMPUTER SCIENCE
Aug 2010 - Sept 2014
Ravangala (Sikkim), India
Cum. GPA: 9.15/10.00
Institute Gold Medal

LINKS

Github:// shankur
LinkedIn:// shankur

GRADUATE
Distributed Systems
Operating Systems
Database Systems
Compiler Construction
Optimization

UNDERGRADUATE
Mobile Computing
Internet & Web Apps
Compiler/Interpreter
Data Structure & Algorithms

SKILLS

PROGRAMMING
> 5000 lines:
C++ • GO • Java
> 1000 lines:
C • BASH • Javascript • Python
Familiar:
GIT • SQL • Docker • Kubernetes

GRANT & AWARDS

2020 • StartUpSecure EUR 850k
2014 • Graduate Fellowship
2014 • Undergraduate Gold Medals
2013 • DAAD WISE Fellowship
2012 • IITB Research Fellowship

EXPERIENCE

SAARLAND UNIVERSITY POSTDOC | TECH-LEAD (CHAINIFYDB)
June 2020 - Present | Saarbruecken, Germany
As a lead of chainifyDB, I am developing the core, managing our developers, and also the business part to bring chainifyDB to market by Q3 2021.

SAARLAND UNIVERSITY RESEARCH ASSISTANT
April 2016 - June 2020 | Saarbruecken, Germany
Worked on the development and optimization of main-memory OLTP systems and permissioned blockchain systems under the umbrella of multiple projects for my Ph.D.

TU DRESDEN UNDERGRADUATE RESEARCH ASSISTANT
May 2013 - Sep 2014 | Dresden, Germany
Analyzed performance bottlenecks and performed algorithmic optimizations in HPC applications such as Trinity RNA-Seq Assembler.

PROJECTS

CHAINIFYDB TRANSFORM DB INTO BLOCKCHAIN SYSTEM
Jan 2019 – Present | Published at CIDR'2021 | Project Leader
Designed and developed the distributed architecture of chainifyDB that allows customers to transform their existing database infrastructure into a permissioned blockchain system. chainifyDB ensures zero down-time, end-to-end encryption, and as low as 17% performance overhead on the underlying database system.

FABRIC++ OPTIMIZING PERMISSIONED-BLOCKCHAIN SYSTEMS
Jan 2018 – Oct 2018 | Published at SIGMOD'2019
Integrated MVCC and TransactionReordering into Hyperledger Fabric, improving the transaction throughput by up to 12x for contended workloads.

ANKERDB HYBRID OLTP/OLAP PROCESSING
Apr 2016 – Dec 2017 | Published at PVLDB'2016 and SIGMOD'2018
Integrated a new system-call inside Linux-kernel to create snapshots of virtual memory. Designed and developed a prototype main-memory, column-store database system that exploits the snapshot system call, to execute analytical workloads under serializable isolation-level at the cost of read-uncommitted isolation level in MVCC.

PUBLICATIONS

[1] Felix Martin Schuhknecht, Ankur Sharma, Jens Dittrich, and Divya Agrawal. Anylog: a grand unification of the internet of things. In CIDR 2020, 10th Conference on Innovative Data Systems Research, Amsterdam, The Netherlands, January 12-15, 2020, Online Proceedings. www.cidrdb.org, 2020.

[2] Ankur Sharma, Felix Martin Schuhknecht, Divya Agrawal, and Jens Dittrich. Blurring the lines between blockchains and database systems: the case of hyperledger fabric. In SIGMOD Conference 2019, Amsterdam, The Netherlands, June 30 - July 5, 2019., pages 105–122, 2019.

[3] Ankur Sharma, Felix Martin Schuhknecht, and Jens Dittrich. Accelerating analytical processing in MVCC using fine-granular high-frequency virtual snapshotting. In SIGMOD Conference 2018, Houston, TX, USA, June 10-15, 2018, pages 245–258, 2018.

[4] Felix Martin Schuhknecht, Jens Dittrich, and Ankur Sharma. RUMA has it: Rewired user-space memory access is possible! PVLDB, 9(10):768–779, 2016.