

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/Department Gold Medals

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

AWARDS

2014 • Graduate Fellowship
2014 • Undergraduate Gold Medals
2013 • DAAD WISE Fellowship
2012 • IITB Research Fellowship

EXPERIENCE

SAARLAND UNIVERSITY POSTDOCTORAL RESEARCHER

June 2020 - Present | Saarbruecken, Germany
As a lead of chainifyDB, I am developing the core, managing our back-end and front-end developers, and also business developers 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 database systems and permissioned blockchain system 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
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. chainifydb: How to get rid of your blockchain and use your dbms instead. In CIDR The Conference on Innovative Data Systems Research, Jan 11-15 2021, 2021.
- [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.