Ankur Sharma

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EDUCATION

SAARLAND UNIVERSITY
PH.D. IN COMPUTER SCIENCE
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**

COURSE-WORK

GRADUATE
Distributed Systems
Operating Systems
Database Systems
Compiler Construction

UNDERGRADUATE
Internet & Web Apps
Data Structure & Algorithms

SKILLS

PROGRAMMING
> 5000 lines:
C++ • Go
> 1000 lines:
C • Java • Bash • Python
Familiar Technologies:
Git • AWS • Docker • Kubernetes
gRPC • Database-internals • Kafka
Hybrid OLTP/OLAP • Blockchain

GRANTS & AWARDS

2020 • StartUpSecure EUR 840,000
2014 • Graduate Fellowship
2014 • Undergraduate Gold Medals
2013 • DAAD WISE Fellowship
2012 • IITB Research Fellowship

EXPERIENCE

AMAZON WEB SERVICES SOFTWARE DEVELOPMENT ENGINEER
Jun 2021 - Present | Berlin, Germany
Working on optimizing and migrating Redshift-Spectrum to the next-generation serverless architecture and also responsible for delivering performance critical features to our customers that helps them in querying data from their data-lake. Responsible for the complete life-cycle of the software from testing, maintenance, to oncall support.

CHAINIFYDB CO-FOUNDER | TECHNICAL LEAD
Jan 2020 - May 2021 | Saarbruecken, Germany
Responsible for the technical development, leading back-end developers, and managing the business activities to bring chainifyDB to market by Q3 2021.

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

PROJECTS

CHAINIFYDB TRANSFORM DB INTO BLOCKCHAIN SYSTEM
Jan 2019 – May 2021 | Published at CIDR'2021 | Project Leader | Patent Pending
Designed and developed the distributed architecture of chainifyDB that allows us to transform a set of existing databases into a blockchain system ensuring zero down-time, e2e encryption, and only 17% overhead on the underlying database system.
`Tech-Stack`: Go | Docker | Kubernetes | gRPC | protobuf | Kafka | SQL | Git | CI/CD

FABRIC++ OPTIMIZING PERMISSIONED-BLOCKCHAIN SYSTEMS
Jan 2018 – Oct 2018 | Published at SIGMOD'2019
Integrated MVCC with early aborts and transaction-reordering into Hyperledger Fabric to improve the transactional throughput by up to 12x for contended workloads.
`Tech-Stack`: Go | C++ | Bash | NodeJS | Docker | gRPC | protobuf | Kafka | Git

ANKERDB HYBRID OLTP/OLAP PROCESSING
Apr 2016 – Dec 2017 | Published at PVLDB'2016 and SIGMOD'2018
Extended Linux-kernel to support main-memory snapshotting. Developed prototype main-memory DBMS to exploit snapshotting and reduce the scanning-overhead in MVCC, bringing down the latency by 4x.
`Tech-Stack`: C | C++ | Column-stores | MVCC | Kernel development | Git | GDB | Perf
Database-internals | Transaction processing | Main-memory snapshotting

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 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 ACM SIGMOD 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 ACM SIGMOD 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.