Ankur Sharma

ankur@chainifydb.io | (+49) 17 33 00 771
https://bigdata.uni-saarland.de/people/sharma.php

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

EXPERIENCE

CHAINIFYDB Co-Founder | Technical Lead
Mar 2020 - Present | Saarbruecken, Germany
I am responsible for the technical development, leading our developers, and also 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.

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 us to a set of existing database infrastructures 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 and TransactionReordering into Hyperledger Fabric, improving the transaction 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
Added a system-call inside Linux-kernel for creating virtual memory snapshots. Developed a simple column-store database system that exploits the snapshotting to execute OLAP workloads efficiently on MVCC-based main-memory database.
`Tech-Stack`: C | C++ | Column-stores | MVCC | Kernel development | Git

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.