

Andrei Lepikhov

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Experience

Postgres Professional

Senior PostgreSQL Developer, Lead of the optimisation lab

Moscow, Russian Federation

April 2023 – Present

- Led query optimiser development (SwitchJoin, built-in re-optimisation, shuffle join, distributed query optimisation, etc.)
- Have contributed to the PostgreSQL core a few optimisation features and numerous reviews.
- Implemented re-optimisation feature for the Postgres enterprise fork
- Participated in Postgres-related conferences, where I talked about directions and trends in query optimisation
- Reviewed the code contributed by the optimisation lab's members.
- Maintained the tech blog about PostgreSQL's new features and challenges

PostgreSQL Developer & Team Lead

October 2021 – April 2023

- Designed the query plan freezing extension (a.k.a. sr_plan)
- Contributed to the PostgreSQL core patches and reviews (Self Join Removal, GROUP-BY Optimisation, ...)
- Invented and designed prototype of the 'Shardman' extension - a distributed database system based on PostgreSQL
- Spoke at conferences about the design of new open-source and enterprise features

PostgreSQL Developer

December 2017 – October 2021

- Participated in the Multimaster extension development. Implemented parallel recovery feature
- Maintained the adaptive query optimiser (AQO) extension
- Developed and maintained Github Actions workflows for the AQO extension
- Contributed minor features for the core PostgreSQL code - Self-Join Removal, WAL compression, BTree bulk deletion

South Ural State University (SUSU)

Assistant Professor

Chelyabinsk, Russia

July 2005 – May 2010

- Performed research on replication and load balancing in distributed databases
- Gave lectures in software engineering and database fundamentals

Skills

Languages: C/C++, SQL, Perl, Python, HTML/CSS, JavaScript, \LaTeX

Skills: Relational Databases, Software Development, PostgreSQL Internals, Code Review, Performance Tuning, Scalability, Team Management, Agile methodologies

Software: Postgres, MySQL, MS SQL Server, Citus, Atlassian (Jira, Confluence), VS Studio, Linux, bash, gdb, perf, git

Education

Lomonosov Moscow State University (MSU)

Ph.D. Computer Science (Distributed Databases)

Moscow, Russia

October 2005 – March 2009

Chelyabinsk State University (CSU)

Specialist in Computer Engineering

Chelyabinsk, Russia

September 2000 – June 2005