

# Archit Mishra

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## Education

2015 – 2019 **University of California, San Diego**, B.S. Computer Science, GPA – 3.80.  
Expected Graduation: June 2019

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## Experience

Facebook **Software Engineering Intern.**

- Worked on the Database Engineering team on the MySQL storage engine MyRocks, which integrates RocksDB as a backend for MySQL.
- Added system information to RocksDB and MyRocks to report transactional deadlocks under the engine's transaction status query.
- Implemented crash safety for auto incrementing values in MyRocks by modifying the storage engine's data dictionary format.
- Cached in memory auto increment value thereby speeding up a specific slow query up to 9 times and preventing a full table scan.

Excelfore Inc **Software Development Intern.**

- Integrated vehicle IOT services with a low latency video camera stream in C++.
- Sped up face detection algorithm by 200% by implementing a prediction algorithm on a 30 MB/s video streaming pipeline.
- Improved lane tracking application by minimizing calculations done per lane candidate leading to a 70% speed up.

UCSD CSE **CS Tutor/Lab Lead.**

- Department
- Taught CSE 12/15L/110 - CS tutor for Data Structures, UNIX Lab, and Software Engineering under professor Gary Gillespie.
  - Assisted students in building high performance data structures such as Binary Trees, Hash Tables, Stacks, and Linked Lists in C, C++, and Java.

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## Projects

Summer 2017 **Facebook MyRocks.**

Open Source Contributor

- Contributed to Facebook's open source MyRocks repository, a fork of MySQL 5.6.35.
- Added statistical counters for deadlock and lock wait timeouts and amended InnoDB table statistics update bug.
- Added diagnostic error messages for distinguishing between types of database deadlocks.

Summer 2017 **Facebook RocksDB.**

Open Source Contributor

- Contributed to Facebook's RocksDB, an embedded key value store.
- Added deadlock tracking infrastructure to display the path upon which a deadlock occurred.
- Designed efficient buffer to store the n latest deadlocks that is currently exposed by MyRocks' engine transaction status command.

Winter 2016 **Java Distributed File System.**

- Developed a distributed file system in Java that is optimized for storing and retrieving many smaller data files.
- Designed system to chunk and send files over the network using Java's standard library sockets.