

# Archit Mishra

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## Education

2015 - 2019 **B.S. Computer Science**, University of California, San Diego, **GPA: 3.80**.  
Expected Graduation: April 2019  
Courses: Computer Networks, Computer Architecture

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## Experience

- Jun-Sep 2017 **Facebook**, Software Engineering Intern, C++.
- Implemented crash safety for MySQL auto increment values by caching each table's auto increment values in the MyRocks data dictionary.
  - Added transactional deadlock tracking infrastructure to RocksDB for reporting transactional deadlock cycles in MyRocks.
  - Sped up table statistics queries by 9 times by caching in memory auto increment values.
- Jun-Aug 2016 **Excelfore Inc**, Software Development Intern, C++.
- 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.
- 2015-Present **UCSD CSE Department**, CS Tutor, Java, C, C++.
- Undergraduate Tutor for Data Structures, Software Engineering, and Advanced Data Structures.
  - Assisted students in implementing Balanced Binary Search Trees, Hashtables, Linked Lists, and Tries.

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## Projects

- Fall 2017 **Internet Router with Diffserv and Firewall**, C, C++.
- Implemented a router that handles IP forwarding, ARP requests and replies, firewall functionality, and differentiated packet service.
  - Designed various packet servicing queues for each interface and allocated different relative bandwidth to each packet queue corresponding to the packet's Quality of Service.
  - Implemented simple subtractive router firewall that restricts access to a range of servers as a function of packet's Quality of Service.
- Winter 2016 **Java Distributed File System**, Java.
- 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.
  - Added in memory tables to buffer writes to disk and increase file write throughput by 50%.

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## Skills

Languages & Skills **C++, C, Java, Python, Networks, Computer Architecture, Databases.**