# MANU GOYAL

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### EXPERIENCE

Google 2014

- Software Engineering Intern on Dremel, a high-performance SQL query engine for web-scale data analysis.
- Developed a new type of lookup join for joining a large partitioned table and a smaller table where a hash join would incur too much overhead
- $\bullet$  Implemented a lookup table on top of Google's in-memory data store capable of high distributed read and write throughput to execute the lookup joins quickly

# UC Berkeley AMPLab

2014-Present

- Working with Haoyuan Li on Tachyon, a fault tolerant distributed file system enabling reliable file sharing at memory-speed across cluster frameworks, such as Spark and MapReduce
- · Implemented fine-grained caching for columnar data
- · Redesigned and optimized the filesystem metadata manager

# Carnegie Mellon University

2013

- Worked with Dave Andersen on libcuckoo, a high-speed, memory-efficient, hash table designed for high levels of concurrency
- Implemented a general purpose, industrial-quality version of the table in C++
- Improved the design to support concurrent expansion and concurrent writers

MemSQL 2012, 2013

- · Worked on a scalable, in-memory database
- · Implemented foreign keys with referential integrity
- Contributed to the frontend dashboard
- Developed a tool to replicate between MySQL and MemSQL
- · Implemented several aggregate and builtin functions
- · Fixed dozens of bugs to stabilize the engine before the first public release

## **EDUCATION**

# UC Berkeley

- Electrical Engineering and Computer Science (EECS)
- GPA: 3.963

### SKILLS STATUS

### **Programming Languages**

C, C++, Python, SQL, Java, Go, HTML, Javascript, CSS, Haskell, OCaml, SML, x86 Assembly, LaTeX

#### **Software**

Emacs, Vim, GDB, Git, Microsoft Office, Adobe CS

Full time student Citizen of United States

2013-2017

### **Honors**

National Merit Scholar National AP Scholar National Honor Society