# VinodReddy Gooty

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**EDUCATION**

**MS in Computer Science**    GPA: 3.9/4.0    Aug 2017 - May 2019
University of Utah, Salt Lake City, USA
*Selected CourseWork:* Functional Programming Studio, Programming Languages, Distributed Systems, Advanced Algorithms, Database Systems, Data Visualization.

**B.Tech in Computer Science**    GPA: 8.1/10    July 2011 - May 2015
National Institute of Technology - Calicut, Kerala, India

**EXPERIENCE**

**Graduate Teaching Assistant**    Aug 18 - Current
University of Utah, *Course:*  CS4150 - **Algorithms**

**Associate Software Developer**    July 15 - July 17
*ThermoFisher Scientific,* Bangalore, India.
- Sustained the company's multiple legacy projects with feature enhancements and bug fixes. Also, assisted in moving the legacy desktop apps to cloud.
- Ported the company's proprietary DNA sequencing algorithm and related libraries from Linux to Windows.
- Automated the process of DNA sequencing analysis and reporting the resultant data through scripts.
- **Technologies:** Java, C/C++, Python(limited)

**PROJECTS**

**Distributed (Raft) Key-Value datastore**
- Implemented a replicated key-value datastore that supports get, put and append operations. Replicas' state and their failures are handled by Raft protocol which is implemented as an independent service.
- Implemented a fault-tolerant Map/Reduce library that speeds up computationally intensive tasks execution by distributing the work among all available servers.

**SimpleDB**
- Developed relational DBMS kernel that supports basic relational operators (joins, aggregates) and transactions. Kernel implements B+ tree indexing, LRU caching, query optimization, and 2PC

**Gradually-typed Interpreter**
- Implemented an interpreter for a gradually-typed language that supports type-inference and let-polymorphism. Gradual-typing combines both static and dynamic typing making it hard to infer static and polymorphic types and distinguish these types from dynamic types.

**Implementation of Extended-Hyperwall**
- Designed a hardware based support to enhance the security of Virtual machines running in virtual environments. This support known as Extended-Hyperwall augments Hyperwall, proposed in the literature, to prevent the rollback based attacks possible on VMs.
- Simulated the proposed design on Xen Hypervisor kernel.

**SKILLS**

**Programming Languages :**  Java, Haskell, C/C++, Go, Scala(familiar), Python(familiar)

**Web Technologies:**  HTML, CSS, JavaScript, D3