Varadhan Ramamoorthy

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Education

Master of Science in Computer Science
The University of Texas at Dallas, TX
Expected Graduation May 2021
GPA 4.0

Bachelor of Technology in Metallurgical and Materials Engineering
National Institute of Technology, Trichy
May 2016

Technical Skills

Languages	: Java, C++, Python, PHP, JavaScript, SQL
Databases	: MySQL, Oracle, SAP HANA
Framework & Tools	: Spring Boot, Express.js, GIT, Gradle

Work Experience

Full-Stack Engineering Intern, SAP America Inc, Reston, VA   Jun 2020 – Aug 2020
- Programmed and deployed new OData APIs for SAP's learning management system using **Java** and improved performance of existing APIs by 20% by adopting asynchronous programming
- Collaborated with product managers to automate testing for 12 different APIs using in-house SIT tool and Cucumber framework

Software Development Engineer, SAP Labs, Bangalore, India   Jun 2016 – Jul 2019
- Designed and implemented several critical components of enterprise Human Capital Management application for SAP SuccessFactors robust extensibility framework "Metadata Framework" using **Spring, and RDBMS**
- Performed primary and secondary research on data corruption and led a team of three engineers in developing application-level Optimistic Locking, resulting in a reduction of data inconsistencies by 80%
- Took the lead in building a "New Service Programming Model" consumed by 8 application team of 300 developers that resulted in a decrease of memory footprint by 50% and performance improvement by 400%
- Instrumental in architecting platform level audit APIs and collaborated with cross-functional application teams to adapt to these interfaces

HCM Cloud Engineering Intern, SAP Labs, Bangalore, India   Dec 2015 – Apr 2016
- Studied and incorporated **Java** based design patterns (Observer pattern, Singleton pattern, Factory pattern, etc.) using Hash tables and Graphs for application enhancements as per customer requirements
- Triaged, Analysed and helped resolve customer issues in high availability production environment

Software Development Intern, VMWare Inc, Bangalore, India   May 2015 – Aug 2015
- Developed internal health monitoring tool for virtual machines based on hardware parameters (CPU core temperature, memory consumption and load), achieved an accuracy of 78%
- Refactored and remodelled core functional behaviour of the tool using **Python** that resulted in 300% improvement in performance

Academic Projects

Leader Election on Distributed System   **Distributed Computing**   Spring 2020
- Developed Hirschberg-Sinclair Leader Election algorithm in a synchronous ring using Multithreading, socket programming and concurrent primitives of **Java**
- Implemented coordinated behaviors and message passing between master and slave threads using synchronization aids, CountDownLatch and CyclicBarrier

V6 file system   **Operating System**   Fall 2019
- Simulated a modified version of the V6 file system to support file size up to 4GB from scratch
- A Shell-based environment was coded in **C++** that supports various commands such as cpin, cpout, mkdir, rmdir, ls, cd, etc. to operate on the file system

Band Gap Estimation using Machine Learning   **Undergraduate Thesis**   Spring 2016
- Built and coded ML models to predict Band Gap of binary compounds using Linear regression and Random Forest with naïve and physical features such as molecular weight, electronegativity, atomic fraction, etc
- Obtained an accuracy of 92% with MASE of 0.265eV

Community Involvement and Affiliations

Association of Computing Machinery (ACM) , Project Officer at UT Dallas Chapter	Jan 2020 - Present
Grads of Computer Science, Event Manager at UT Dallas	Aug 2019 - Present

Relevant Coursework

Design and Analysis of Algorithms	Distributed Computing
Advanced Database Design	Advanced Operating Systems
Web Programming Languages	Real-Time Systems