Kanth Kumar Dayanand

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Education

May 2017 Master of Science in Computer Science GPA: 3.70/4.00
Rochester Institute of Technology, Rochester, New York
Course work: Foundation of Algorithms, Distributed Systems, Advanced Algorithms, Parallel Computing, Web Services & SOA, Foundation of Computer Networks

June 2012 Bachelor of Engineering in Information Science GPA: 3.42/4.00
University Visvesvaraya College of Engineering, Bangalore, India

Technical and Programming Skills

Programming Languages:	Java, JavaScript, Python, C and C++
Frameworks & Tools:	Spring, RxJava, Hystrix, Akka, Map-Reduce, Mockito, JMockit, Git
Web:	NodeJS, RESTful, SOAP, AngularJS, BootStrap, HTML5 and CSS
Databases:	MongoDB, SQL, MySQL, JDBC

Work Experience

July 2017 - Present Software Engineer 2 at Intuit, San Diego, California
TurboTax (Core Tax Services)
Working on re-writing the java services that is currently using POX API'S for creating, modifying and parsing the tax documents to use REST based SDK. Java, Spring-Boot.
Worked on creating new version of java library that supports create, update & list operations on tax, user-experience and commerce data for *TurboTax* online. Java, Spring.
Implemented new rest endpoint for enabling *TurboTax* customers to successfully delegate their tax returns to tax expert. Java, Spring

June 2016 - Dec 2016 Software Engineer Co-op at Intuit, San Diego, California
TurboTax
Developed a tool for cross-checking the *Jira* issues with *GitHub* commits to automate the pre-release activities of our backend services. Java, Spring, Bootstrap
Worked on implementing the Circuit-Breakers for Java services to enable resilience using Hystrix.
Implemented asynchronous caching to store financial document providers information and reduced our service response time by ~2seconds
Worked on adding the new features to Java Services for importing customer tax documents to TurboTax.

Sept 2015 - May 2016 Graduate Research Assistant, Rochester Institute of Technology
Designed and developed a website (PencilPuzzle) for listing the puzzles and lab assignments related to introductory Computer Science topics. AngularJS, Bootstrap

Jun 2015 - Aug 2015 Software Engineering Intern at Cisco, San Jose, California
VxLAN - Virtual Extensible LAN
Developed a cli command for comparing the run-time configs with the configs stored in *In-memory* database.
Implemented a consistency check feature for *VxLAN* component deployed in dual homed environment - *vPC*

Oct 2012 - Aug 2014 Software Engineer (Consultant 4) at Unisys, Bangalore, India
Unisys Content Management System (InfoImage)
Developed reusable Portlets and Plugins in Liferay portal. Java, JavaScript (D3.js), AJAX
uWork - Web client for document management system
Developed UI templates and client-side APIs for consuming RESTful services using JavaScript libraries.

Project Work

Code clone detection: using Program Dependence graphs
Designed and implemented a tool to represent the *Java* programs as graphs and used network alignment algorithm to identify code clones. Java8, Antlr4.

Dataflow Network
Developed an infrastructure using Akka concurrency framework allowing the user to write sequential programs that forms the computational "vertices" of dataflow network and communicate via channel specified as "edge". Java, Akka

HyperLogLog - Near optimal cardinality estimation algorithm
Implemented HyperLogLog algorithm for approximating the cardinality of large data sets using Map-Reduce paradigm.

Distributed File System
Implemented a *Hadoop* like Distributed File System. Features include basic File System commands (*mkdir, ls, put, get*), File Namespace, Block Replication, Fault Tolerance using *HeartBeat* mechanism. Java

State Synchronization Protocol
Implemented a UDP based protocol for transferring the file/text reliably by synchronizing states between the client and server. Features include Client *roaming*, *HeartBeat* mechanism. Java, Protocol Buffers

Content-Addressable Network (CAN)
Implemented scalable, P2P *distributed system* that provides hash table functionality for searching files on internet-like scale. Features include Node join and leave, File insert and retrieval, Search query routing. Java

Ricart and Agravala - Mutual Exclusion Algorithm for Distributed Systems
Implemented a mutual exclusion algorithm to control the process entering into Critical section on a distributed system.

Scholarships

RIT 2014 30% wavier in tuition fees as merit scholarship.
UNISYS 2013 *Innovative Thinker* award for designing and developing the iOS app