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Rahul Kumar

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Education

Ohio State University — **Columbus, OH** — **Aug 2018 – Dec 2019 (Expected)**

- **Masters in Computer Science** — **GPA: 3.60**
- Related Coursework: Algorithms, Advanced Operating Systems, Introduction to Parallel Computing, Network Security, Communication Networks, Fundamentals of Programming Languages, Distributed Enterprise Computing

BMS College of Engineering — **Bangalore, India** — **Aug 2011 – Jun 2015**

- **Bachelors in Computer Science & Engineering** — **GPA: 3.60**
- Related Coursework: Algorithms, System Software, Cloud Computing, Computer Networks, Computer Organization & Architecture, Storage Area Networks, Theoretical Foundations of Computation.

Experience

Software Developer Intern — **Nutanix Inc., San Jose** — **May 2019 – Aug 2019**

- Worked with Flow Team on Security Policies. Worked on Visualization tool to capture and visualize network traffic for machines defined in a security policy.
  - Technologies used: Golang, Kafka, JSON.

Graduate Research Associate — **Ohio State University, Columbus** — **Aug 2018 – May 2019**

- **Tensor Transposition Library for GPUs (TTLG):** TTLG is a library to efficiently transpose a n-dimensional tensor.
  - Wrote new CUDA kernel functions and refactored some existing kernels to improve the performance by over 25%.
  - Wrote different machine learning models such as Linear Regression, Decision Trees, Artificial Neural Networks etc. to evaluate and compare the performance of the kernel functions.
  - Technologies used: Nvidia Cuda, C++, Python.

Software Development Engineer — **Oracle India, Bangalore** — **Aug 2015 – Jul 2018**

- **Joint Venture Management (JVM):** JVM is an application suite to manage a merger, acquisitions and a joint venture between two or more companies.
  - Designed and developed the Overhead Module of JVM from scratch.
  - Worked closely with customer focus group and product strategy to discuss requirements, set goals and periodic review.
  - Technologies used: C++, Java and NER (Oracle in-house tool).
- **Orchestration Studio:** This is an IoT (Intenet-of-Things) tool which connects Oracle JDE apps to the external devices.
  - Made changes to existing enterprise applications in order to include the features supported by Orchestration Studio.
  - Created a number of sample applications to demonstrate the use of IoT using an ERP to executive staffs and customers.
  - Technologies used: Oracle ADF, Groovy, C++, NER, JSON.
- Re-factored applications, fixed bugs and improved performance by optimizing database queries in several modules such as Advanced Job Forecasting, Health & Safety Management, Contract & Service Billing etc.

Software Developer Intern — **ShoreTel Inc., Bangalore** — **Apr 2015 – July 2015**

- Debugged and fixed compatibility issues between Shoretel Architectural components and AWS while working on providing a proof of concept (POC) to migrate ShoreTel components from private cloud to public cloud.

Languages and Technologies

- C, C++, Golang, Java, Python, MySQL, MongoDB, HTML, JavaScript, MATLAB
- Linux, Docker, Kubernetes, jQuery, Bootstrap, AngularJS, REST, Git

Projects

- **Migrate Karbon Execution Plane to AWS | Golang, Kubernetes, JSON, AWS** | Team of 4
  - Karbon is the Kubernetes Solution by Nutanix for on-prem cluster.
  - Provided PoC to migrate the Karbon execution plane to AWS with the control plane in On-prem Nutanix Cluster during the U-Hack (Interns' Hackathon) Week.
- **Chrome Extension to easily manage JDE inventory | Javascript, Chrome APIs** | Team of 2
  - Created a chrome extension for inventory management application at Oracle JDE Ideathon challenge.
  - Using this extension, the frequently used items and the group of items were stored in the local database and could be added to application grid in a single click.
- **Object Detection using Fast R-CNN and YOLO | Python (Scikit, Keras, openCV)** | Team of 2
  - Identified and located cars and stop signs on the road in images using Fast R-CNN.
  - Designed a model using YOLOv3, that leveraged from transfer learning using VGG to detect the same objects as in Fast R-CNN. Compared the performance of YOLO model with Fast R-CNN.