VINITA PARASRAMPURIA

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EDUCATION

New York University — New York City, NY
Master of Science, Computer Engineering, CGPA 3.96/4.0, Summa cum laude Honors — Sept 2021 - May 2023
Data Structures & Algorithms, Database Management System, ML, Internet Architecture & Protocol

Jadavpur University — Kolkata, India
Bachelor of Engineering, Instrumentation and Electronics, CGPA 9.56/10, University Topper — July 2012 - May 2016
Numerical Methods & Comp Prog, Object Oriented Prog, Comp Organization & Networking

SKILLS

Languages: Java, Python, C, C++, JavaScript, HTML, CSS, SQL, Shell, Bash
Technologies: Spring Boot, .NET, MVC, JPA, GIT, Jira, MySQL, NoSQL, NodeJS, ReactJS, Postman, REST API, AWS, S3
Network: TCP/IP, OSPF, BGP, DNS, NAT, DHCP, NTP, VPN, SNMP and network security, RIP, MPLS, ICMP

PROJECTS

E-commerce analytics pipeline — Oracle SQL Developer, Data Modeler, MySQL, Tableau

- Designed the logical and relational model from over 50k data entries of an e-commerce platform after data normalization.
- Created ETL and CDC code to load data from OLTP database, transform it to match DW schema design, and load it to DW database.
- Used advanced database features like external tables, partition tables, function base indexes, triggers, procedures, SQL Loaders.
- Carried extensive data analytics using Tableau to deduce loss factors resulting in improved marketing strategy and profits.

Classification of photographs of food items — Keras, Numpy, Pandas, Sklearn, TensorFlow

- Defined data generators to create augmented samples using ImageDataGenerator and used Keras to load images as required in batches.
- Used VGG16 model from Keras to prepare base model and fine-tuned it implementing transfer learning to improve accuracy by 15%.

Experimental study of TCP CCA performance at core and edge scale — Wireshark, MATLAB, CloudLab, Python, Bash

- Conducted experimental study of fairness and throughput of multiple congestion control algorithms-BBR, Cubic and NewReno.
- Wrote bash and Python scripts for experiment automation, data analysis and visualization on CloudLab and FABRIC testbeds.
- Successfully presented a poster in SIGCOMM Conference, 2023. Was appreciated for results, easy to follow code and future insights.

PROFESSIONAL EXPERIENCE

Research Assistant, New York University (Hybrid) — June 2023-Aug 2023

- Research on existing ISP network topologies and their capacities using traceroute and Looking Glass to build resilient networks.
- Build experimental profiles using bash and Python on Linux systems hosted on educational testbeds like FABRIC and CloudLab.
- Setup access and transit networks with redundant paths and configure OPSF/ BGP routing on FRR to emulate real-world network.

Cloud Automation Engineer Co-op, Nokia Corporation of America (Remote) — Jan 2023 – May 2023

- Defined, tested, and documented APIs for user management in ETSI-MANO architecture to meet customer requirement.
- Built an application to centralize KeyCloak and KeyStone AAA for different cloud infrastructure applications using ReactJS.
- Developed and tested python scripts to perform Cloud infrastructure hardware diagnosis to enhance reliability and cost savings.

Graduate Teaching Assistant, Internet Architecture & Protocol, New York University (Hybrid) — Sep 2022-Dec 2022

- Collaborated with the Professor to maintain course website, addressing student queries, promoting interactive learning environment.
- Led engaging discussions and sessions delving into topics such as TCP/IP, NAT, subnetting, routing, SNMP, ICMP, and DHCP.

Senior Instrumentation Engineer, Cairn Oil & Gas, Vedanta Ltd. (In-person) — July 2016-Aug 2021

- Established an IOT network across different sites to increase reliability of level measuring unit with $7mn/year expected savings.
- Enhanced operational efficiency by process automation, real time monitoring, data visualization and analysis using PLC/SCADA.
- Managed project schedule and used agile techniques for installation, testing and commissioning of a plant worth $230mn.
- Achieved 33% increase in sales capacity of plant and meeting client needs by installing additional gas stream in fiscal metering unit.

ACCOMPLISHMENTS

- 2022:1st Prize in Morgan Stanley Code to Give Hackathon for making a web app to match a mentor and mentee using ReactJS.
- 2020: Chairman's award for "Process Improvement through Innovation" from 75,000 employees for multi-million dollar savings.
- 2020-Identified as Young Leader for delivering a project on "Media relations and content strategy" from a pool of 150 employees.