PARTH VIPUL SHAH

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EDUCATION

University of Southern California (USC)   **Los Angeles, CA**
Master of Science in Computer Science; GPA 3.67   Jan 2022–Dec 2023
PES University   **Bangalore, India**
Bachelor of Tech. in Computer Science and Engineering; GPA 4.00 (9.06/10.00)   Aug 2017–Jul 2021

SKILLS

- Technologies: Perf, Linux, PostgreSQL, Docker, AWS, Azure, GCP, Airflow, React, MongoDB, .NET, Git, TensorFlow, Neo4j
- Languages: Bash, C/C++, Python, JavaScript, C#, HTML/CSS, SQL, Solidity

EXPERIENCE

Oracle – Linux Foundation   **Redwood Shores, CA**
Linux Performance Engineer   May 2023–Aug 2023
- Developing tools and methodologies to characterize, analyze and profile workloads used to stress test Oracle Linux.
- Exploring the kernel coverage of workloads that are used to examine and optimize the Unbreakable Enterprise Kernel's performance using **Feedback Directed Optimizations (FDO)**.

Commvault   **Bangalore, India**
Associate Software Engineer   Jan 2021–Dec 2021
- Spearheaded development of the PostgreSQL data agent - multi-stream file system/dump-based backups and restores.
- Enabled protection of on-prem and cloud (AWS, Azure, GCP) PostgreSQL databases for **25+** environments by working on **90+** enhancements and defects.

RESEARCH

Information Sciences Institute, Los Angeles, CA   Nov 2022–Present
- Creating a Bayesian model to represent Ranked Choice Voting responses. Can predict the outcome of elections in the United States and segment populations based on survey responses.
- Studying the biases in Large Language Models (LLMs) like ChatGPT and LLaMA. Using LLMs to build accurate mental models of under-represented populations to aid data collection.

PES University, Bangalore, India   Jun 2020–Sep 2020
- Prediction of the Peak, Effect of Intervention and Total Infected by the Coronavirus Disease in India: Forecasted using the SEIR compartmental model. **3 citations**. Published with the Cambridge University Press. doi.org/10.1017/dmp.2020.321.

SSCU, Indian Institute of Science (IISc), Bangalore, India   Jun 2019–May 2020
- Conceived 3 parallel algorithms for computing correlation functions using the MPI standard in C - achieved **super linear speedups.** Released package on a **120** node HPC cluster, academic paper is under review.

LEADERSHIP AND INVOLVEMENT

University of Southern California
- **Graduate Student Programmer** – Created data pipelines for report generation using Airflow. Reports used to track master's and PhD candidate's program progress. Designed a REST service for **10K+** PhD candidate's thesis to be automatically published to USC's Digital Library using Microsoft's .NET Core.

PES University
- **Teaching Assistant** – Big Data: Designed an online submission portal for auto evaluating assignments of **300+** students. Secure, scalable and feature rich portal in React.
- **Coding Division Head** – The Alcoding Club: Mentored multiple software development projects. Organized an inter-collegiate competitive coding contest with **50+** teams. Created a portal with the MERN stack that facilitated contest ranking and online judging. Beta tested by **800+** students.

PROJECTS

- Video Indexer: Indexes a video into scenes, shots and sub-shots based on visual and audio features. Achieved **99%** accuracy.
- Nutritional KG: A recommendation system that uses a knowledge graph with **10K+** entities to help minutely alter your diet.
- Database as a Service: Created using Docker, RabbitMQ, ZooKeeper. High availability and scalability. Tested on AWS. **100%** uptime and supported **500+** concurrent reads/writes.