

Kasturi Shirish Vartak

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EDUCATION

State University of New York, Binghamton

Master of Science, Computer Science

Expected May 2021

Savitribai Phule Pune University

MSc In Computer Science

Jun 2015 – May 2017

BSc In Computer Science

Jun 2012 – May 2015

TECHNICAL SKILLS

Programming Languages: Python, Java, C

Web Technologies: JavaScript, Node.js, jQuery, React, PHP, Express, Flask, Django, HTML, CSS, DOM, JSON

Database: SQL, MongoDB, PostgreSQL

Others: AWS, Docker, Spark, MapReduce, Kubernetes, Kafka, GCP, Git, Linux, NumPy, Pandas, NLTK, TensorFlow, matplotlib

EXPERIENCE

Binghamton University [Python, Flask, JavaScript, SQLite]

Binghamton

Research Assistant

Aug 2020 – Present

- Restructured datasets and developing automation scripts to map kldb92 to kldb2010 indexes of Socio-Economic Panel (SOEP) data to analyze the labor market effects of Syrian refugees in Germany

Global Health Impact, Research Aide Web Developer

Jun 2020 – Sep 2020

- Built a forecasting tool with Python, flask, SQLite to measure pharmaceutical product's impact on global health to advance access for medicines
- Reduced data entry time by 35% by developing scripts to automate data collection/analysis process

Veritas Software Technologies [Java, SQL, Salesforce.com, REST]

Pune, India

Associate Developer

Jul 2017 – Apr 2019

- Developed integration scripts to communicate with web services and automation scripts to manage logs
- Reduced workspace rules from 30 to 12 and case loading time by 30% using query and workflow optimization
- Designed and optimized coding components by performing root cause analysis (RCA) and utilizing a test-driven development approach in an Agile environment
- Worked as a cross-functional SME in Data Power migration project
- Received 3 Veritas applause awards for exceptional perseverance

Project Intern

Jan 2017 – Jun 2017

- Developed Veritas Support website (Landing page and case management module) using integration with Salesforce API
- Collaborated with the team of 3 to re-engineer historical case model by implementing microservices in Java and SQL
- Built a basic prototype of in-house chat application with AWS EC2, S3, Lambda, Cognito, DynamoDB

PROJECTS

Live Video Streaming and Chat [Node.js, GCP, Docker, Kubernetes, YAML]

- Built a web application using WebRTC to add real-time communication and socket.io to provide bidirectional communication channel between client and server for chat
- Packaged the application in a Docker container image and run it on a Google Kubernetes Engine (GKE) cluster to support auto-scaling and load-balancing capabilities

Light weight vs heavy weight virtualization [sysbench, iostat, QEMU]

- Conducted detailed configuration and performance tests to analyze critical factors like the CPU utilization rate, I/O throughput, latency and disk utilization in a multi-processing cloud system
- Compared performance reports of traditional systems with hypervisor-based virtualization against modern lightweight solution

House Party [Python, Django, React, JavaScript]

- Developing a collaborative music playing full-stack application for a group of people to control the music being played at parties for guests to play, pause, skip and vote for a song playing on Spotify

Twitter effect on Billboard HOT 100 [Python, NLTK, PostgreSQL, MapReduce, Chart.js, Flask]

- Built a web scraper for Billboard's featured charts and a continuous data collection system with Twitter streaming API
- Performed sentiment analysis with NLTK Vader Sentiment Analyzer to analyze how positive, negative tweets affect Billboard Hot 100 chart ranking

Microprocessor Pipeline Simulator [C]

- An Out-of-order APEX pipeline simulator to demonstrate cycle-by-cycle execution of sequence of assembly instructions
- Implemented multiple Function Units, ROB to support Load-Store, branching instructions and data forwarding