GARVIT KATARIA

+1 (412) 214-2182 | garvitk@andrew.cmu.edu
github.com/garvitkat | garvitkataria.com | linkedin.com/in/garvitkat/

WORK EXPERIENCE

Dolby Laboratories **San Francisco, CA**
Cloud Media Intern **June 2022 – Aug 2022**

- Executed end-to-end product migration to Azure – constructed Terraform scripts to provision resources, configured CI/CD pipelines using GitLab and ArgoCD, and set up Prometheus and Datadog dashboards for monitoring.
- Orchestrated chaos testing with 1000 users and benchmarked CDNs fault tolerance, identifying a critical memory leak bug.
- Programmed a multi-path content delivery tool with GoLang using internal libraries for a video steaming SaaS platform, resulting in 17% reduced buffering time.

Noida Metro Rail Corporation **Delhi, India**
Software Engineering Intern **September – December 2020**

- Designed and implemented a task allotment microservice on Spring Boot by analyzing live Kafka stream of staff location.
- Matched request with employees' Samza key-value store considering parameters like personnel's skill, minimum Euclidian distance, number of jobs assigned during the day, and gender.
- Performed exploratory data analysis to determine if social distancing was being followed, locate hotspots, identify location-time patterns and plan spaced commuting, reducing staggering of crowds by 23%.

PROJECTS

Twitter Analytics RESTful Web Service **January 2022 – May 2022**
Aim: To develop a high-performance web server for handling different kinds of data query requests

- Extracted, Transformed and Loaded (ETL) 1 TB of raw Twitter data set into MySQL and HBase using PySpark on Azure.
- Designed web service using undertow which could handle over 10000 requests per second, and deployed it on AWS.
- Optimized throughput by caching, indexing, sharding, and schema/cluster configuration tuning.

Advanced Resource Scaling of Distributed Services on Cloud **January 2022 – February 2022**
Aim: Invoke cloud APIs to programmatically provision and deprovision cloud resources for a dynamic load

- Achieved elasticity and handled load variability for a QR encode/decode application by defining autoscaling strategies.
- Containerized the application using Docker, deployed it on a Kubernetes cluster and achieved a throughput of 70k requests per second within the budget of $0.70 per hour.
- Identified downstream service failure, routed traffic away from a failed cluster, and scaled up the service in a multi-cloud environment.

The Smart Pill Bottle: Detect Pill Bottle using Touch Screen's Capacitance **November 2020 – March 2021**
Aim: To identify the pill bottle label by simply placing it on the phone's touch screen

- Engineered conductive-ink stickers (imitating human finger-like touches) to create a unique pattern on the touch screen.
- Developed a cross-platform application to decode the pattern and ascertain the user's medicine name, dosage, number of pills remaining, and if the tablet has been taken.
- Received funding from National Taiwan University and achieved a System Usability Scale score of 85.94 for 30 candidates.
- Built using JavaScript, React, Google Speech-to-Text API, Node.js, App Engine, and designed with Material UI.

EDUCATION

Carnegie Mellon University, Pittsburgh, PA **August 2021 – December 2022**
Master of Information Systems Management *GPA: 3.67/4.00*
Current Coursework: Cloud Computing, Data Structures for Application Programmers, Object Oriented Programming in Java, Database Management, Distributed Systems, Agile Methods

Vellore Institute of Technology, Vellore, India **July 2017 – July 2021**
Bachelor of Technology in Information Technology *GPA: 4.00/4.00*
Relevant Coursework: Data Structures, Software Engineering, Machine Learning, Software Project Management

SKILLS

Programming: Java, C++, Go, Python, JavaScript, SQL, Bash, Linux, Node.js, Shell Script

Technologies: AWS (EC2, S3, RDS, Lambda, ELB, Autoscaling, API Gateway, EMR, CloudWatch, IAM), Azure (VM, Storage, Log Analytics, Application Insights, Key-Vault, Load Balancers) GCP (Compute, Storage, Container Registry, Kubernetes Engine), MapReduce, Helm

Tools & Frameworks: Docker, Kubernetes, Terraform, Spark, React, Flask, Kafka, Samza, Jupyter, Jenkins, JIRA, Confluence

Database: MySQL, MongoDB, Apache HBase, Neo4j

LEADERSHIP AND AWARDS

- **Outreach Head, IETE-ISF,** Headed Synergy – a tech symposium with the participation of 1500+ students **December 2020**
- **Dean's Merit List '18, '19** & Recipient of **Special Achiever Prize '19, '20** **November 2020**
- **HackOff, Major League Hacking Asia-Pacific –** 2nd among 300 students **January 2020**
- **YHack - Yale University, New Haven** – 1st in JetBlue airline track among 120+ selected teams **October 2019**