YASHDEEP THORAT

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EDUCATION

University of Illinois at Urbana-Champaign — Aug 2022 - Dec 2023
Masters in Computer Science, GPA: **3.94**/4.0
Relevant Courses: Advanced Data Management, Cloud Computing applications, Software Engineering
Birla Institute of Technology and Science, Pilani — Aug 2015 - May 2020
Bachelor of Engineering in Computer Science, Master of Science in Physics, GPA: **8.87**/10.0

TECHNICAL SKILLS

Languages: C++, Python, JavaScript, TypeScript, Java, C#, SQL, HTML, CSS, PHP
Frameworks: Angular, React, FastAPI, Flask, .Net Core, Node.js, Postgres, MySQL, PyTorch, CUDA, JUnit
DevOps: Kubernetes, Terraform, Docker, Azure DevOps, Jenkins, Service Fabric, Kafka, AWS, Git
Data and Visualization: Spark, Databricks, Azure Data Factory, Azure Synapse, Apache Airflow, Power BI

WORK EXPERIENCE

Microsoft — Aug 2020 - Aug 2022
Software Engineer — *Hyderabad, India*

- Led the design and development of **ETL pipelines** and reporting dashboard using **Azure Synapse** and **PowerBi** to demonstrate the platform's impact and reduce data refresh time from over **6 hours to 30 minutes.**
- Developed a web application using **React, ASP.Net Core and SQL** stored procedures to provide user management capability to admin users, allowing quick access provision and **reducing engineering effort by 90%**.
- Engineered distributed applications across Azure Cloud infrastructure, with seamless integration of **Azure Databricks, App Services, and Service Bus** instances, ensuring scalable and resilient system architecture.
- Refactored Linux and Windows-based applications into microservices, deploying them on **Kubernetes clusters with Helm charts**, achieving a **28% reduction in cloud costs, saving $34K annually**.
- Conducted **Load testing** of ASP.Net core APIs by configuring **JMeter** scripts in Visual Studio.
- Recognised as a top performer and received awards in Executive Challenge and Sponsored Hack categories in the **Microsoft Global Hackathon 2021** for integrating accessibility features in Microsoft Teams.

OTHER EXPERIENCE

National Center for Supercomputing Applications — Aug 2022 - Present
Research Assistant — *Urbana, IL, USA*

- Created a **FastAPI-based Kubernetes job manager** to execute and monitor **ML models** using **Sidecar pattern**, enabling **10000+ researchers** analyze protein sequences.
- Building a web application based on a graphics extraction pipeline using **Python, Angular, YOLO-based parser, MinIO and 3rd party cheminformatics APIs** to extract molecular diagrams from PDF documents and enable fingerprint search.

Qubole — July 2019 - Dec 2019
Software Intern — *Bangalore, India*

- Designed Directed Acyclic Graphs with **Apache Airflow** with **Hive** and **Spark** operators.
- Built a cost attribution model based on **CPU usage metrics** for a heterogeneous cluster - helping customers optimize their **big data** queries and reduce compute cost by **40%**.

PROJECTS

CNN implementation on NVIDIA GPUs (CUDA): Implemented various GPU optimizations with memory coalescing - resulting in a **30% reduction in kernel execution time**. Leveraged **Nsight Compute** to profile results and analyze memory workload and bottlenecks.

MediaWiki Multi-page edit: Developed a plug-in leveraging **PHP and JavaScript** used by **1000+ websites(wikis)** as part of Google's Summer of Code program for Open Source organizations. The feature allows wiki admins to create and edit multiple pages in a wiki through a single spreadsheet-like interface.

Flaky Tests: Identified and fixed **JUnit** tests incorrectly assuming deterministic implementation of non-deterministic Java specifications in **Apache Druid**.