ATHIRA NIRMAL

New York | 6073130631 | athiranirmalk95@gmail.com | https://www.linkedin.com/in/athira-nirmal | https://github.com/AthiraNirmal |
http://athiranirmal.github.io

PROFESSIONAL EXPERIENCE

The Research Foundation, SUNY | Research Assistant   Jan 2022 - Nov 2022
- Developed a Type 2 **Hypervisor** using **QEMU** Monitor console with KVM accelerator which increased the performance by 15%
- Migrated one virtual machine's memory state, superpage content, and network connectivity to another virtual machine
- Reduced the copy overhead by 92% compared to the baseline using *lseek* instead of memcpy

IBM | Applications Developer   Sep 2018 - Jul 2021
- Built and maintained an end-to-end **ETL** pipeline from **AWS S3** to **Snowflake Data Warehouse**, resulting in a 10% increase in data processing speed and executed over 1,000 MySQL database queries and python scripts to automatically checkout the code from **Git**
- Incorporated entire frontend/backend modules using **Python** with over 10,000 lines of code for the client Airbus
- Designed, analyzed, and implemented various applications using BI tools such as Tableau, resulting in a 25% increase in user adoption
- Proficient working with version control systems like **GIT** and used Source code management tools **GitHub, GitLab, Bitbucket**
- Engineered various ETL flows and data processing tasks using Informatica PowerCenter PySpark, with a total of 100TB of data processed
- Performed tasks such as reading data from external sources, merge data, perform data enrichment and load in to target data destinations and created DAGs to run the **Airflow**
- Created a Lambda Deployment function which processed over 100,000 events per day, with an average latency of 10 milliseconds
- Led a 6-member team while providing support to L2 team in troubleshooting, participated in software design and resolved over 500 issues
- Devised test scenarios for **smoke suit** , **regression sui**t and performed **unit testing** using **RFHUtil** with a 95% pass rate
- Experience in developing micro services in IIB using **ESQL** and **Java**, connecting different applications and system architecture
- Worked with cross-functional teams to identify and prioritize business requirements, resulting in a 15% increase in customer satisfaction
- Involved in the Software Development Life Cycle and worked on **Agile** methodology, including 100+ team-based design and code reviews
- Facilitated customizations for improving design flow and increased process efficiency by 20% by analyzing the connection issues
- Able to work independently and as part of a team, with strong communication and problem-solving skills

EDUCATION

Binghamton University, State University of New York, Thomas J. Watson College of Engineering   **Binghamton, NY**
Master of Science in Computer Science   May 2023
Cumulative GPA: 3.60/4.00

University of Kerala   **India, Kerala**
Bachelor of Technology in Computer Science and Engineering   Aug 2018
Cumulative GPA: 3.50/4.00

TECHNICAL SKILLS

Programming Languages: Python**,** C/C++, Java, ESQL,Shell Script, JavaScript,Haskell,HTML, CSS
Data Engineering Skills: Airflow, Spark, Kafka, Snowflake,Informatica PowerCenter, AWS , Tableau, Power BI
Database: NoSQL: MongoDB, MongoDb Atlas, Robo 3T **RDBMS**: SQL, MySql, PL-SQL, Oracle, DBeaver, Redis,PostgreSQL
Cloud Technologies & Version Control: Docker, AWS, Azure, Git, GitHub, Bitbucket
Software & Libraries: Anaconda, PyCharm, IBM Integration Bus, WebSphere MQ, Linux/Unix, QEMU-KVM, Scrapy, JIRA, Tomcat, Jenkins

PROJECT EXPERIENCE

Data Engineer | ETL on YouTube trending video data using AWS Services   Aug 2023 - Sep 2023
- Employed AWS services, including S3, Glue Catalog, Lambda, Athena, and AWS Glue ETL to streamline the ingestion and transformation of Kaggle's Trending YouTube Video Statistics data, achieving a 40% improvement in data processing time and generated a clean dataset in Parquet
- Technologies: **AWS services - S3,Glue Catalog, Lambda, Athena, SQL**

Application Development | Automated Application filling | https://github.com/AthiraNirmal/AutomatedApllicationFormFilling.git   Jan 2023 - May 2023
- Developed a Python application that automatically fills out application forms (URLs) using Selenium and Flask along with web based UI
- The application has been tested on over 100 forms and has saved users an average of 30 minutes per form
- Technologies: **Python, Selenium, Flask, HTML, CSS, CSV**

Data Engineer | Web Scraping - Election result prediction | https://github.com/AthiraNirmal/Web-Scraping-and-Election-Prediction-.git   Aug 2022 - Oct 2022
- Collected election related posts in JSON format from 4Chan API by using HTTP request and conducted sentiment analysis
- Developed processes to extract, transform, and load data from 4Chan into a centralized database and collected 778880 posts
- Predicted the election results and developed a web based UI to visualize the data, prediction and posts with search bar
- Implemented Redis caching for Search feature, as a result the fetching speed was increased by ~2x
- Technologies: **Mongo DB, Python, Power BI, Flask, HTTP Request, HTML, Docker, Redis, Big Data Analysis, JSON, XML**

Database Systems | Student Registration System | https://github.com/AthiraNirmal/Student-Registration-System--Oracle.git   Mar 2022 - May 2022
- Implemented a student registration system that supports university registration details for courses using Oracle and Java
- Optimized database performance by fine-tuning SQL queries and indexing strategies, reducing query execution time by 40%
- Technologies: **PL/SQL, Java, NetBeans, Oracle, DBeaver, Swing, MySql**

LEADERSHIP EXPERIENCE

Graduate Student Organization (GSO) , Binghamton University   **Binghamton, NY**
President   Jul 2022 - Jul 2023
- Led the organization with 3000+ members and acted as a liaison between the graduate students and the administration
- Collaborated the often-conflicting needs and wants of the student body, committees, senate, and administrators and implemented an improved culture among all graduate students by increasing their participation in social events by 70%