

SONG COOPER

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EDUCATION

European University of Lefke

Bachelor's of Degree in Software engineering

Relevant coursework: Databases, Object Oriented Programming, Data Structures & Algorithms, Artificial Intelligence, Operating Systems, Machine Learning

Final Year Project: Binory - Model Operating System

- Designed and implemented a unix-based operating system in C++
- Awarded second prize in Computing's senior design project (out of 120 + students)

PROFESSIONAL EXPERIENCE

Bit Project

Data Engineering Intern

- Developed ETL pipelines using spark, python, restful APIs and azure storage to collect bulk data from various sources such as IOT devices, web application etc for faster processing
- Improved the accuracy on downstream machine learning prediction models by 12% through the data extracted from various sources.
- Collaborated with other engineers on creating serverless based application solutions with azure functions

Zuri Teams

Software engineer Intern

- Managed a process re-engineering project to improve medical service to access and educate children with disabilities and consolidate end-to-end service processes; restructured communication flow among 10 departments and cut down paperwork by 75%.
- Optimised key MySQL queries which reduced average query runtime by approx 45%
- Implemented REST API and improved code coverage by 30% through API automation testing

PERSONAL PROJECTS

Spotify ETL Data Pipeline | Python, MongoDB, Airflow, Spotify API

- Created an ETL pipeline that fetches data from the Spotify API, process the data and load data into MongoDB
- Utilised apache airflow to create DAG's to schedule the data pipeline to run daily.
- Showcased visualisation on the transformed data with seaborn and matplotlib library.

IoT Smart Metre Pipeline | Azure storage, Databricks, Spark, Kafka

- Implemented an end-to-end IoT solution simulating high velocity, high volume data emitted from smart electric metres and analysed
- Designed a lambda architecture, filtering a subset of the telemetry data for real-time visualisation on the hot path, and storing all the data in a long-term storage for the cold path

Stock Market Data Streaming | AWS EC2, Kafka, AWS Glue, AWS Athena

- Built a real-time data streaming simulation app to fetch data for a given business data from stock exchanges
- This project captures relevant stock prices from different exchanges, cleans the data then analysed using AWS athena

TECHNICAL SKILLS

Languages: Python , SQL , Java, C/C++, Javascript, Shell/Bash Scripting

Tools: Azure, AWS, Kafka, Spark, Airflow, MongoDB, Snowflake, Linux, Databricks, MySQL, PostgreSQL, Dbt

Other Tools: Power Bi, APIs, Pandas, Seaborn, Matplotlib, Automation, Web Scraping, Kubernetes, Docker, Git

Certificates: IBM Data Engineering Professional, Microsoft Azure Data Engineering Associate (DP-203)