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SUMMARY

  Two years of progressive work experience as a **software engineer,** developing robust web and event-driven services with micro-services on multiple projects. Worked as a **computation officer** in the ROK Navy for **two years**.

WORK EXPERIENCE

Java Software Engineer. Beaconfire (DriveWealth as a client), New Jersey.   July 2022 - Present

   Drive Wealth is a finance brokerage company that uses legacy systems to provide a flexible service in the fund trading process to serve better user experience such as queuing the fund trades by different client categories.

- Utilized **AWS cloud services** to fulfill scalable and sustainable app services along with failover preventions.
- Optimized Database update statement to handle 100,000+ orders with **batch update**, and used **optimistic locking(MVCC)** for a **lazy fetch** to avoid inconsistent data fetch in high volume of data collections.
- Applied various **software design patterns** to provide highly reusable and self-descriptive codes.
- Used **Log4j2, Marker** and **Sumo Logic** for enhanced debugging processes in multiple environments.
- Conducted **Non Functional Requirement** testing to ensure the product is ready for the enterprise release.

PROJECTS

Mutual Fund Anytime Of Day, mutual fund team   June 2023 - Present
- Participated in development of core **SpringBoot microservice** application. Processing event-driven fund orders, user accounts, and corporate activity fund transactions by utilizing **web-API(REST Controller)**, **Java scheduler**-based **S3 bucket** download, **SFTP**, and message streams(**Kafka, AMQ**) services.
- **Multi-processor** environment that satisfies **synchronous** and **asynchronous** flow with event listener architecture that interacts with multiple microservice applications and databases(**Azure SQL, PSQL**).
- Reduced endpoint-based health check failure rate from 40 per hour to zero by changing to **actuators health check** where Kubernetes liveness probe will no longer restart the service due to the timeout on endpoint request.
- Developed **OMS(Order Management System)** by reorganizing legacy code and object mapper to support a new asset across different services where order communicates through **AMQ** in **JSON** message.

Data Reconciliation, mutual fund team   March 2023 - May 2023
- Implemented a reconciliation system to ensure data consistency in multiple DB: **Dynamo**, **PSQL**, and **MSSQL**.
- Applied **stream** based data fetch strategy to avoid the usage of **JVM** in-memory space with the use of **cursor** pointer and increase the fetch speed to 2s from 60s by using **aggregation** on **partitioned index**.
- Fully incorporated service and repository layer for unit tests with JUnit5 associated with docker's dest container and **transactional H2 database** system to guarantee the isolation from the real data in active databases.

Tax Automation, post trade team   Nov 2022 - Feb 2023
- Developed monolithic java application in **EC2** server which handles tax management reports based on millions of client profits and saving records. Increased processing efficiency under 30 minutes from a day process combining **parallel stream** processing, **caffeine caching**, **DynamoDB parallel scan** on cache lookup failure fallback.
- Implemented to label custom text and images to pdf tax reports with **Java AWT** package tools configured with customized **JSON** parser. Flexible execution service by providing **parameterized CLI** commands.

Kafka Partitioning, post trade team   Sep 2022 - Oct 2022
- Collaborated on resolving the resource bottleneck of the existing **kafka partitioning** system by customizing **index selection** strategy, and modified grouping to distribute partitions by changing the keywords.
- Utilized apache **Kafka consumer** and **producer** services to leverage **fault-tolerance** capability with highly available and replicable service for every incoming transaction message.

EDUCATION

Florida Institute of Technology, Melbourne, Florida.
May 2022. **B.S. in Computer Science**.   GPA: 3.36 / 4.0

TECHNICAL SKILLS

Back-end tech	Java Spring, Spring MVC, Spring AOP, JDBC, Hibernate, Jooq, JSP/JSTL, Reactor
Languages	Java 8, Java 17, Python, JavaScript, React/Node, Linux & Windows batch script
Database	PostgreSQL, DynamoDB, AzureSQL, MySQL, MongoDB, Oracle DBMS, H2, Redis
Cloud Service	DynamoDB, RDS, S3, Kafka, Lambda. Microsoft Azure, MongoDB Atlas, AWS EC2, Jfrog
Testing tools	Kubernetes, OpenShift, Swagger, Postman, Mockito, Junit5, Jacoco, JStack, JMC, VisualVM
Other	Jira, Jenkins, Maven, Visual Cron, WSL, Agile, Design Patterns, Putty, Docker, Git, Github