

**To Whom It May Concern,**

It is my honor to submit the letter of recommendation for Lin Xiaoya, who worked as a Data Scientist intern under my supervision in GLOBALFOUNDRIES GIGA+ (SG MFG Excellence) from May 25 to Dec 25. During her 7 months internship, I was able to observe first-hand her ability to combine technical innovation with rigorous research capability to resolve complex engineering challenges.

**Resolving scalability challenges with Large Dataset on (AWS) Cloud Platform**

Working on **AWS (Amazon Web Service) Sage-maker AI Platform**, the solution developed addressed scalability issues in data export by introducing advanced N-split chunking strategies and optimizing storage with Parquet and Snappy compression. This resulted in **90%** reduction in file size, reduce single-tool data extraction time by **97%** and further reduce computing resource in modeling.

**Novel solution for Equipment Parameters Fault Classification with unlabeled data.**

A novel ensembled method of **Guard-Band + OC-SVM model** was developed to classify unlabelled equipment parameters traces as existing methods were not suitable after thorough literature survey. Her final model achieved a higher accuracy than traditional Guard-Band method by **14%**. (95% vs 81%).

**Excellent collaboration with Engineering Team**

She worked closely with the Fab engineers (Module: Etch and CVD) to validate her findings and to provide them with actionable insights based on her report.

**Excellent Addition to PhD Program/ Data Science/ Engineering Roles**

Based on her track record during her internship, I am confident she will excel in her PhD program and in future Data Science/ Engineering roles. Please feel free to contact me if you require further information regarding her performance.

sincerely,

**Khoo Yong**

Member of Technical Staff (MTS)

GlobalFoundries Singapore

[yong.khoo@gf.com](mailto:yong.khoo@gf.com) | 97823746

