Yu-Xiang Su

🎓 M.S., Information Technology of Civil Engineering at National Central University 2020 -2022
🎓 B.S., Department of Civil Engineering at National Ilan University 2016 -2020

📞 0928503936

✉ pansusum1997@gmail.com

 https://github.com/Felixsu1997

Unikorn Semiconductor Corporation・Process integration Engineer / Hsinchu 2023/7 – present

```
AOI/SEM/DOE/EDA/SAS/SEM/FMEA/FIB/VBA/Python/Yield improvement/root cause analysis of defects/device physics
theory/optical measurement instruments
```

- **Improved product yield for customers**, responsible for products including BAW filter components and micro LEDs, primarily enhancing abnormal appearance and real-time monitoring of electrical frequency.
- **Continuous improvement of the New Tape Out SOP:** Improved the appearance and yield of BAW products through photomask modifications, reducing equipment anomaly occurrence from 80% to 30%, and enhancing product appearance and yield from 50% to 90%.
- **Customer returns analysis:** Verified incoming micro LED products using EFC & Chroma penetrative inspection equipment (such as X-ray/Tera Hertz/IR), identified abnormal incoming materials, and set inspection standards, saving the company about 6 million per year.
- **Process improvement:**
1. Observed in the SPC chart that the rework rate for photoresist stripping was as high as 50%. Collaborated with the etching team to optimize the photoresist stripping method, reducing the rework rate to 12%.
2. Introduced ASH processes and optimized cleaning procedures for BAW filters, reducing defect occurrence rate from 70% to 10%.
3. Adjusted ICP process parameters and equipment cleaning methods for uLEDs, reducing walkway contamination from 80% to 30%.
4. Collaborated with the module team to adjust SS4 parameters for cleaning optimization, enhancing product yield by 80%.
5. Collaborated with the photolithography team to adjust conditions for BAW filter product anomalies and worked with the etching team to adjust parameters, reducing scratching and abnormal issues from 80% to 30%.
- **Data analysis:**
1. Utilized SAS analysis software and combined it with machine learning to quickly identify feature values for improvements, increasing work efficiency by 70%.
2. Collaborated with IT to implement AI, using Python and the TensorFlow framework to develop a CNN for automatic defect type recognition with an accuracy of approximately 80%.
- **Database maintenance:** Maintained the KLA database, handling daily maintenance and anomaly resolution.

Delta Electronics, Inc・Electric Vehicle Business Group, Internship / Zhongli 2020/12 – 2021/7

```
C/Labview/excel/electronic circuit
```

1. Optimized product stability using C language and enhanced product testing processes with Labview.
2. Improved hardware by soldering circuits and redesigning product layouts, facilitating market introduction and automating systems and equipment. These efforts increased operational efficiency, and improved product quality and yield stability by 80%.

Other

```
Machine Learning/NodeJS/Python/Arduino/Jupyter/CNN/MQTT/Tensorflow/CAD/Revit
```

- **External Training Program:**Process and Equipment Overview from NYCU
- **Course Certification:** completed online courses in Linux & DBA during after-hours, earning completion certificates.
- **Thesis:** Predicted the future growth of electric vehicles and overall electricity consumption using machine learning.
- **Spatiotemporal Data Analysis and Visualization:** Analyzed changes in travel destinations during the pandemic using Python web scraping and text mining.
- **Deep Learning in Information Management:** Conducted image recognition using Jupyter, TensorFlow, and CNN.
- **Circuit Board Design:** Designed circuit boards for WiFi communication protocols, temperature and humidity sensors, wind direction sensors, and integrated with software for successful installation on solar panels to monitor power conversion,basic electronic circuits, Arduino, Node.js, and MQTT.