Jesco Tan Jiong Rui

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EDUCATION

Singapore University of Technology and Design (SUTD) — **Singapore**
Sep 23 to Present

- Bachelor of Engineering (Engineering Systems and Design in, Minor in Intervention in Design, Technology and Society & Healthcare Informatics), Honours.
- Focus Track: Business Analytics and Operations Research.
- Expected Date of Graduation: May 2027.

WORK EXPERIENCES

Wieland Metals Singapore, Intern — **Jun 19 to Dec 19**

- Worked in Rolled Product as a Process Engineer.
- Implemented Total Productive Maintenance in many facilities, also researched into 6S Lean Management.
- Gained familiarity and skills in reading intricate machine schematics and cataloging.
- Brought forth the ability to work well independently and with others.
- Served as a dedicated and supportive Intern in a fast-paced environment.

ACADEMIC RESEARCH PROJECTS

Wieland-Werke AG & Duale Hochschule Baden Württemberg — **Germany**
Optimiertes Metallverarbeitungssystem, Process Improvement Engineer — **Aug 22 to Nov 22**

- Identified a significant production bottleneck caused by the late detection of defects (black spots) on metal sheets after the flattening process.
- Designed and implemented an automated defect detection system utilizing a custom-designed, high-heat resistant camera system to withstand extreme operating temperatures.
- Developed image processing algorithms to automatically scan the underside of metal sheets and identify defects in real-time.
- Integrated the system into the production line, enabling early detection of defects and preventing further processing of unusable materials.

Wieland-Werke AG & Duale Hochschule Baden Württemberg — **Germany**
Optimierung der Metallspleißmaschine, Lean Manufacturing Engineer — **Aug 21 to Nov 21**

- Implemented 6S methodology across a designated set of metal splicing machines, resulting in a 15% reduction in workspace clutter.
- Led the application of Kaizen and 6S Lean Management to optimize the operation and maintenance of metal splicing machines.
- Developed and implemented standardized work procedures for machine operation and maintenance, leading to a 20% reduction in operator errors and 15% improvement in machine uptime.
- Conducted root cause analysis on recurring machine downtime events and implemented corrective actions, resulting in a 12% reduction in unplanned downtime.
- Improved preventative maintenance schedules for metal splicing machines, leading to a 10% increase in meantime between failures (MTBF).
- Collaborated with cross-functional teams (operators, maintenance technicians, and supervisors) to identify and address process bottlenecks and improve overall equipment effectiveness (OEE).
- Contributed to a 14% reduction in defect rate through process optimization initiatives on the metal splicing machines.
- Trained machine operators in new procedures and best practices, ensuring consistent application of improved processes.
- Documented process improvements and created training materials to facilitate knowledge transfer and sustain improvements.

Wieland-Werke AG & Duale Hochschule Baden Württemberg **Germany**
Konstruktion und Dokumentation einer Glühmaschine, Lead-Assist Inspector **Aug 20 to Nov 20**

- Developed and refined documentation based on inspections, ensuring compliance and verifying part specifications.
- Verified component specifications and proper assembly through hands-on examination of the machine.
- Gained practical experience in technical documentation and quality control for electromechanical systems.
- Vendor Management: Liaised with multiple companies to source and acquire necessary components, ensuring quality, timely delivery, and adherence to specifications.
- Training Coordination: Collaborated with various departments to develop and implement effective training programs for employees on machine operation and maintenance.
- Safety Analysis & Mitigation: Proactively identified and documented potential safety hazards associated with the machine and contributed to developing solutions to mitigate their severity.

Temasek Polytechnic - Mitsuboshi Belting Ltd **Singapore**
Increasing Efficiency of Production, Leader & Coder **Apr 16 to Oct 16**

- Researched and developed a custom in house machine for automation to improve the company's revenue.
- Created 3D-CAD and Engineering Drawings using Creo 3.0.
- Generated Bill of Materials.
- Programmed a factory machine for production use.
- Debugged factory machines to reduce time waste.

CO-CURRICULAR ACTIVITIES

House Guardians **Singapore**
President & Housing Rep **Jan 24 to Present**

- Served on a 6-member executive committee responsible for leading and coordinating activities for a 50-member organization.
- Took care of the welfare of 1100 residents in hostel.
- Represented the entire student body in forums with the school's higher management on topics related to Housing.

ROOT – Student Government **Singapore**
Student Relations Director **Dec 23 to Feb 25**

- Worked together in a team of 5.
- Represented the student body by bringing up academical feedback and issues to the higher management.
- Collaborated with senior leadership to address and resolve challenges.
- Engaged with diverse student groups to understand and represent their needs.
- Organized events to foster community engagement and collaborative initiatives.
- Enhanced communication strategies to improve interaction with students and faculty.

ADDITIONAL INFORMATION

- Technical Skills: R, Excel, Python, C++, Sql, Javascript, Creo, Siemens NX, Git, Julia
- Language Proficiency: English, German, Mandarin, French, Italian
- Interests: Snowboarding, Wakeboarding, Technology