Yen Wen Chen

Mobile: (886) 910-618688 | Email: jenny.yenwenchen@gmail.com | LinkedIn: Yen Wen Chen

WORK EXPERIENCE

Micron Technology *Taoyuan, Taiwan*
Data Scientist *Sept. 2022 - May 2024*

Optimization of wafer move flow plan for 40+ production lines (C#, SQL, IBM Cplex)

- **Achieved 98% customer demand fulfillment** by developing a multi-objective mathematical linear programming model to optimize wafer step moves, advancing future step planning by one month.
- Led cross-functional collaboration and **conducted in-depth data analysis to identify 5% output gains through strategic changes**. Negotiated robust solutions aligning with user requirements.
- Collaborated with a third-party company to optimize run-time efficiency through a two-tier modeling, **incorporating 40% data integration**, significantly **reducing solving time from 10+ to 2 hours.**

Optimization of machine scheduling for 300+ tool groups (Python, SQL, IBM Cplex)

- Engineered a multi-objective mathematical constraint programming model to minimize total completion time for each tool group, **facilitating efficient resource allocation** for 4,600+ lots of wafers.
- Developed meta-heuristic algorithms to improve run-time performance by 30% and **conducted analysis that pinpointed critical run-time factors**. Experiments demonstrated that genetic algorithm outperformed tabu search algorithm by 80% in optimizing performance.

SKILLS

- Programming Languages: C#, C++, Python, SQL, LINQ, BigQuery, OPL
- Tools and Platforms: Git, Google Cloud Platform, Azure DevOps, Tableau, Snowflake, IBM Cplex
- Optimization and Modeling: Linear programming, Constraint programming, Meta-heuristic algorithms

EDUCATION

National Tsing Hua University *Hsinchu, Taiwan*
Master of Industrial Engineering and Engineering Management (GPA: 4.08/4.30) *Sept. 2020 - Aug. 2022*

National Chiao Tung University *Hsinchu, Taiwan*
Bachelor of Industrial Engineering and Management *Sept. 2016 - June 2020*

PROJECT EXPERIENCE

Google AI Hackathon - memory bank chatbot (Python, BigQuery, GCP) *May 2024 - June 2024*

- Engineered database architecture and backend integration for efficient data processing on GCP, enabling scalable, quick access to summarized information and enhancing productivity and user experience.

Taiwan High Speed Rail - rostering system maintenance (C++, IBM Cplex) *Mar. 2021 - Jan. 2022*

- Managed technical maintenance of THSRC Rostering System and troubleshot technical issues. Conducted analysis to identify bottleneck constraints and enhanced run-time efficiency by 25%.

Giant Bicycles - bicycle spray paint scheduling (C#, IBM Cplex) *Mar. 2021 - Jan. 2022*

- Formulated a mathematical model for scheduling bicycle spray painting operations, achieving near-optimal solutions within 4 hours.

Optimize double-stack-well cars space utilization (C#, IBM Cplex) *Aug. 2020 - Jan. 2021*

- Addressed stacking restrictions and maximized space utilization through optimization techniques. Implemented a two-stage modeling with strategic bounds to improve run-time efficiency by 20%.