Logan Heying

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https://github.com/MidwestGames/MidwestGames

EDUCATION

IOWA STATE UNIVERSITY Ames, Iowa August 2019 – Present

- Bachelor of Science – Aerospace Engineering (Fall 2023)
- GPA: 3.28/4.00
- Dean's List - Spring 2021

EXPERIENCE

INTEL CORPORATION Rio Rancho, New Mexico November 2021 - Present

Capacity Industrial Engineer/Model Industrial Engineer

- Capacity analysis of Wet Etching and Spray Etching machines in Fab 11/11X
  - Metric based analysis of run-rates, manufacturing availability, and layer validation
  - Statistical analysis of real-time data vs model on record (MOR)
  - Cycle time and through-put analysis to determine how many tools are required per the expected ramp
  - Cost analysis of various production changes i.e.
    - Chemical conversion
    - Tool conversion
    - Tool purchase
- Create and analyze "what-if" requests from the module partner to better understand process development
  - Capacity-based approach for new tool types and layer development to
  - Cycle time analysis when adding or removing tools
- Actively maintain an MOR of all tools associated to the Wet-Spray module
  - Quarterly long range plan (LRP) updates to new wafer volumes for increasing demand
  - Bi-annual MOR scrub and update to remove unneeded information and identify new factory limiters to further increase quality and efficiency
  - Quarterly metric validation of every toolset to ensure up-to-date capacity needs
- Development of automation programs to better assist all team members
  - Created Python application to calculate the batch size and run-rate of the diffusion reactor toolset, improvement from hand calculation
  - Created Python application to create the tank constrained model for all wet-bench tools, improvement to outdated Excel sheet (previous revision in 2020)
  - Development of multiple SQL queries to further the various applications in place and to create new analysis types
- Lead developer of the Chamber Efficiency Application (CEA) and subsequent functions
- Development of the 3 inch wafer model for Pick-and-Place tool based on real-time data, improvement from manual time-study (4-5 week lead time)

- Capacity and cost analysis of fleet reduction project in the spray etch module
- Multiple “white paper” analyses verifying the capacity impact of various process change
- Complete model on record verification for new product startup
    - Verify all metrics from testing site located elsewhere
    - Partner with the “Seed” engineers to create accurate tool requirement projections

AIR FILTER BLASTER Spencer, Iowa May 2014 - August 2019
Assembly and Packaging Technician

- Assembled finished products
- Packaged units for shipping
- Reduced packaging cycle time by 25%
    - Changed the process order
    - Expanded the assembly area

PFEFFER PRECAST Algona, Iowa May 2020 – August 2021
Welder and Concrete Technician

- Increased septic tank production from 3 tanks to 5 tanks a day
    - Decreased process time by 30% through weld time and concrete pour efficiency
- Learned material properties of different steel rods and concretes
- Designed an A-Frame crane hoist
    - Designed and drafted engineering drawings
    - Material selection

TECHNICAL SKILLS

- SolidWorks, Blender, Microsoft Office Suite, Adobe Creative Suite
- Python, MATLAB, Java, C#/C/C++, Arduino, VBS/VBA, SQL

ACTIVITIES

- Iowa State Naval ROTC: August 2019 – August 2020
    - Awarded National 4-Year Scholarship, declined
- Volunteer work
    - Services at sporting events
    - Community dinners
- Volunteer Fireman, Dickens, Iowa
- Personal video game development enterprise
    - Created multiple prototype video games (none are published)
    - In-Development
        - Lotus Game Engine (Java Game Engine using OpenGL)
        - Java based Pokemon Clone (Education purposes only)
        - Unity Engine Pokemon Clone (Education purposes only)
- CyLaunch Program: January 2022 - May 2022
    - Developed back-end software for automatic air-brake deployment
    - Developed payload device carrier
        - Test flight used a “Shock mount” improvised vibration dissipation assembly
    - Team based payload software development