Yannick Iniatius Mavita Gata

NY • 646-623-4359 • mayan936gmt@gmail.com • https://pubmed.ncbi.nlm.nih.gov/35913052/

SUMMARY

Recent graduate with over a year of experience in **statistical process control**, 5+ years in **SolidWorks**, and 3+ years in **laboratory research.** Contributed to over **2 scientific publications,** and **industry-related projects** in **manufacturing field**.

EDUCATION

M.S. Manufacturing Engineering January 2024 – December 2025
Arizona State University (ASU), Tempe, AZ

- Relevant Coursework: *Quality Control Manufacturing*, *Engineering Computing with Python*

M.S. Materials Design and Innovation September 2021 – December 2022
University at Buffalo (SUNY), Buffalo, NY

- Relevant Coursework: *Multivariate Statistics*, *Material Informatics*

B.S. Biomedical Engineering September 2016 – May 2021
University at Buffalo (SUNY), Buffalo, NY

TECHNICAL AND SOFT SKILLS

SPC | SQC | Python (5 years) | MATLAB (5 years) | Excel (5+ years) | Minitab (5 years) | SolidWorks (5+ years) | AutoCAD (2 years) | Laboratory Research (3+ years) | English (Fluent: 12+ years) | French (Native) | Spanish (Fluent: 5+ years).

PROFESSIONAL EXPERIENCE

University at Buffalo (SUNY) — Research Aide & Co-Author Sept 2021 – Dec 2022
Buffalo, New York

- Handled laboratory equipment, including chemicals such as hydrochloric acid, lithium fluoride, dimethyl sulfoxide, etc.
- Performed **etching, centrifugation, delamination,** and **CVD** adhering to laboratory standards and safe practices
- Analyzed data and delivered results through **written reports, documentation,** and **presentations** across research teams
- Conducted over 100 MXene-synthesis experiments achieving an estimated product reporting purity of ~50 to 75%

PROJECTS AND DISCOVERY

Arizona State University — Graduate Engineering Project (EGR 522) Sept 2024 — Dec 2024
Tempe, Arizona

- Analyzed full manufacturing process for CNC laser-machine tables from cutting to assembly to identify Lean waste
- Performed **inventory** and **lead-time analysis** across 10 component categories; **Pareto** chart evaluation showed that large **excess inventory** (about 80%) originated from small part types (~20%)
- Calculated **average inventory wait time** of 16.25 days (SD = 11.51), revealing **high process variability** and **weak** scheduling control. Inventory lasting up to 34 days driving 140–180% **excess space used** relative to **available capacity**
- Evaluated plasma-**cutting performance** and documented > 600% (17 mins vs 128 mins) **variation** in cut time for different parts, caused by pierce point density and complex geometry, with some cuts taking 6 times longer than others
- Proposed a **Just-In-Time** (JIT) production strategy **expected** to reduce **excess inventory** by 40–60% and recommended **5S**, **Kaizen** improvement practices, and **automation** (repetitive tasks) to reduce **cycle time** by an estimated ~25-30%
- Applied **Lean Manufacturing** and Six Sigma **DMAIC** principles for data-driven improvement and **root cause analysis** (Fishbone/Ishikawa) to evaluate **management decision**, **lead time** for **coating-vendors**, and **production timing**

Arizona State University — Engineering Project (SolarSPELL) Sept 2024 – Dec 2025
Tempe, Arizona

- Developed a soil-monitoring **device**, equipped with solar and low-power capability, using ESP32 and LilyGo T-HiGrow sensors to help farmers make agricultural decisions in remote regions and preserve resources, cost, and energy
- Implemented TinyML models using TensorFlow/Python on **this device**, and processed data and analyzed sensor features like moisture, humidity, temperature, pH, and salinity through regression to predict soil moisture levels for coffee crops
- Tested how well the model worked on **5** different soil-moisture **datasets**. One dataset reached a very low error (MSE = 0.00011376), which was over **99% better** than the dataset with the highest error (MSE = 0.119822). With improved predictions, farmers will be able to get instant feedback about the soil's health like when to water and use resources
- Presented results to faculty at a **Poster Session**; however, continued working on the project beyond the class