Kanangnut Siriphool

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SUMMARY

Experienced Data Analyst adept at qualitative research within chemical industries for 4.5 years, driving product specification enhancements, cost savings, and innovation. Also, an accomplished Quality Engineer with 4.5 years of expertise in the automotive industry, ensuring top-tier quality, compliance, and continuous improvement. Proficient in analytics, project management, and cross-functional collaboration.

Skilled in extracting insights from complex datasets, analyzing chemical and automotive data, identifying KPIs, ensuring data accuracy, and driving actionable improvements. A problem solver with a sharp analytical acumen, dedicated to enhancing operational efficiency and driving business growth across both industrial sectors.

WEBSITES

Portfolio website: https://kanangnut.github.io
GitHub: https://github.com/Kanangnut
LinkedIn: https://www.linkedin.com/in/kanangnut-siriphool
Medium: https://medium.com/@kanangnut.s

EDUCATION

Silpakorn University, Thailand **May 2009 – Dec 2014**
Bachelor of Bioprocess Engineering (B.Eng.)

Project
A Computer Program for Determining Parameters of Cell Growth Kinetic Equation | C, MATLAB, API
This thesis develops a MATLAB program utilizing the Nelder-Mead method for optimizing parameters in a cell growth equation with experimental data. It constructs mathematical models like the Monod model, yielding minimal issues. The program determines μmax, Ks initially, then Kd, Kp, enhancing optimization efficiency.

SKILLS

Core Skills: Data Analysis, Requirements Gathering and Analysis, Business Process Modeling, Data Visualization, SQL and Database Querying, Project Manager, Process Improvement, Market Research, Data Processing, Business Case Development.
Languages: Python, SQL, R, JavaScript, CSS, HTML
Database: MySQL, MSSQL, PostgreSQL
Data Visualization Tools: Tableau, Power BI
Frameworks and Libraries: API, ETL/ELT, Airflow, Kafka, Spark, MapReduce, pandas, NumPy, Matplotlib, Tensorflow, Scikit-learn, Keras, Seaborn, Docker
Developer Tools: Microsoft Office (Word, Excel, and Power Point), Git, VS Code, IntelliJ, Notepad, Dreamweaver, Microsoft FrontPage, Google Sheets, Jupyter Notebook, PyCharm, Google Sheets, Jupyter Notebook
Operating system: Windows, UNIX (with experience in Linux and MacOS)

WORK EXPERIENCE

STMicroelectronics Pet., Ltd. | Singapore **Jun 2022 – Present**
QUALITY CONTROL

- Conducted rigorous quality control (QC) testing of products throughout mass production and during new prototype development, utilizing statistical analysis and data-driven methodologies to make informed decisions regarding the release or rejection of defective products.
- Executed QC analysis of finished products in adherence to established protocols, employing statistical methods and data visualization tools to extract insights and identify trends.
- Leveraged the Advanced Networking Terminal Application to analyze and edit wafer maps for wafers categorized with server defects, employing data visualization techniques to assist in identifying root causes and communicating findings effectively to relevant departments.
- Engaged in routine maintenance tasks within the laboratory environment, ensuring data integrity and instrument reliability.
- Maintained meticulous records, prepared detailed reports, and drafted correspondence pertaining to data analysis findings and quality control processes.
- Managed and documented equipment within the EWS laboratory, promptly identifying and addressing any anomalies or technical issues to ensure the integrity of data analysis processes.

INEOS Styrolution Co., Ltd. | Thailand **Nov 2018 - May 2022**
QA&QC ENGINEER

Key Result Area: New Prototype and Project improvement activity

- Plan and organize ABS, ASA, SAN, SSAN and Rubber product, customer requirement, product development and product sample including to interim production to serve APAC marketing and sales requirements in a timely manner.
- Arrange on-site product specification approval as customer request.
- Strictly follow global raw material positive list and product stewardship regulatory guideline for both new product development and current product recipe in case of any changes.
- Maintain Global Product Application database for new product development; define prelim code, issue final product code, maintain product formulations and product specifications etc.
- Maintain approved product specification target in process measuring servers for further production control.
- Create new product BoM, specification and SHE BoM for new color. Announce to all concerns for respective documents maintaining.
- Process MOC, DOE and PSSR for BoM and specification changes.
- Create and maintain product recipe in Production Level 2 program.
- Coordinate with global RDC and APAC team to execute the necessary measurement procedures and update the existing measuring techniques/equipment's to standardize with global procedures.
- Plan, establish and maintain calibration and preventive maintenance program of ABS, ASA, SAN, SSAN and Rubber equipment, and ensure the calibration is passed to obtain the accuracy and reliability of testing equipment. Take necessary actions when required.
- Coordinate with concern on set up new testing method according to customer requirement, testing standard (ISO/ASTM), etc.
- Analyze and identify area of improvement of the product operation to enhance quality of service, cost effectiveness of product formulations and achieve cost saving target.
- Support QA&QC Manager for developing and coaching technical team personnel to continuously improve their functional competency to effectively fulfill their job requirements.
- Supervise technicians to ensure the good condition of laboratory operation, laboratory equipment including safety, environment and housekeeping.
- Utilized extensive expertise in the plastic resin industry to effectively benchmark product properties against competitors, facilitating the refinement of the product line to enhance competitiveness and ensure alignment with industry standards.

Key Result Areas: Customer related activity

- Cooperate with PM, TPM and RDC for new product development or modification, and new customer. Do the lab scale compounding and quality assessment. Contact local external laboratories for technical testing.
- Request registration and maintain QM master data of new product into SAP system.
- Alignment with TPM for finalize BoM, specification and COA including special key property for TDS of new/modified product to be monitored.
- Create new BoM, specification, COA and SHE BoM for new/modified product, and announce to all concerns for respective documents maintaining.
- Coordinate with Production engineer and concerns to process MOC for new/modified product. Summary the product quality regarding to MOC result.
- Monitor key TDS property of new/modified product for executive few campaigns. Summary data for TPM on further TDS review.
- Arrange the special testing regarding product stewardship regulatory requests, customer requests. Coordinate with internal and external third-party laboratories, or cross sites laboratories.
- Lead investigation for customer feedback and/or complain regarding to product deviation and technical issues through RCA process. Summary investigation 8D report and track corrective action status to prevent recurrence issues.
- Prepare product sample for Logistics as customer request, control and update the product sample request file and communicate to QC team.
- Support QA manager as assignment on customer visit, customer audit etc.

Key Result Areas: Raw material and Packaging related activity

- Assess new product and raw material with coordinate with global and APAC RDC, to ensure the positive will be updated.
- Aligned with TPM, RDC and Product stewardship the special assessment on the product regarding to changes on colorants and/or additives. Arrange the special testing required for the assessment.
- Ensure approved product and raw material are added into site AVL and communicate to concerns for respective controls.
- Ensure the deletion items from positive list is update in the site AVL and communicate to concerns for respective controls. Align with concerns for transition period of consuming old stock of deletion items or proposal on write off.

- Coordinate with Production engineer and concerns to process MOC for new/modified product. Summary the product quality regarding to MOC result.
- Cross site sharing for opportunity for improvement in term of quality and competitive cost.

Key Result Areas: Product control related activity

- Ensure the latest product recipe is maintained and ready to use in Production Level 2 program.
- Ensure the product specification target, external and internal specification including control range are define and communicate to laboratory for production control.
- Provide technical support to production and laboratory in order to resolve problem on product specification adjustment.
- Track and analyses the product performance from real product for further improvement and review against BoM.
- Lead investigation regarding to product deviation and technical issues through RCA process. Summary investigation report and track corrective action status to prevent recurrence issues.
- Provide product training to laboratory technician and production as requested.
- Key Result Areas: Management system
- Be a lead auditor of Quality management system and at least 1 other system
- Be owner of concern work instructions and forms including Risk assessment and Environmental aspect for Laboratory.
- Summary monthly report, KPI, prepare SQC chart for products and prepare data for management review.
- Conduct training on related procedure to Productions or concerns areas
- Compliance to management systems ISO9001, ISO14001, ISO45001 and ISO50001
- Internal auditor ISO50001.

Key Achievement:

- Data Analysis: Utilized statistical analysis of both structured product properties and unstructured data to enhance streak performance, extending the shutdown period of a SAN reactor from 1 month to 3 months. This improvement resulted in a 200% increase in production performance.
- Qualitative Research and Market Penetration: Successfully optimized rubber properties, leveraging structured and unstructured data for Indian market. Product ready for competitive market penetration in India.
- Data Analysis: Employed statistical analysis to adapt product specifications regarding Alpha-Methyl Styrene Acrylonitrile contamination, effectively eliminating instances of off-grade products. This proactive initiative resulted in a notable 23% enhancement in business performance.
- Data Analysis and Technical Development: Developed a program to calculate Ammonium Nitrate (AN) content results within the Macro FTIR platform using OMNIC FTIR software. This initiative aimed to prevent shutdown situations, ensuring continuous operation and efficiency in analytical processes.
- Digital Transformation and Project Management: Led the "Champions of Digital Workplace Thailand" project, overseeing the migration of internal documents from Lotus Notes IBM database to the global intranet, improving accessibility and collaboration.
- Regulatory Compliance and Global Standardization: Spearheaded the project to ensure regulatory compliance with EU food contact amendments and customer declarations of residual styrene in product Material Safety Data Sheets (MSDS). Implemented Globally Harmonized System (GHS) labeling to ensure standardized compliance across regions.

Tetra Pak Ltd. | Thailand **Jun 2017 - Oct 2018**
QUALITY ENGINEER

Key Result Area: New Prototype and Project Improvement Activities

- Managed quality control processes for plastic packaging straw production, including validation of new models.
- Conducted inspections, tests, and sampling procedures to maintain quality standards across incoming materials, in-process production, and finished products.
- Oversaw disposition of raw materials and products, ensuring compliance with release, hold, or rejection criteria.
- Drove key performance indicators (KPIs) including Equipment Effectiveness (EE), Defect Waste, Process Waste, and Claims.
- Executed testing procedures and prepared certificates of analysis (COA) and health certificates.
- Developed work instructions, one-point lessons, and supporting documentation to align with operational processes.
- Conducted audits and reviewed procedures to ensure compliance with quality standards.
- Managed defect and process waste reduction initiatives, contributing to reduced production costs and machine downtime, and provided monthly monitoring reports.
- Responded to quality tool calibration needs within the preventive maintenance (PM) module.
- Managed quality problems and implemented corrective and preventive actions.
- Addressed internal claims and quality tags, driving resolution of issues.
- Contributed to quality improvement and waste reduction efforts through World Class Manufacturing (WCM) methodology.
- Ensured compliance with WCM, ISO9001, ISO14001, OHSAS18001, ISO45001, BRC, and FDA requirements.
- Managed tool calibration transactions (PM Module) and procurement processes (ME12N and MIGO) in SAP.

Key Result Area: Customer Related Activities

- Led investigations and analysis to resolve and close claims and customer complaints, both domestic and overseas.
- Conducted on-site investigations to address issues at customer sites in APAC.
- Prepared analysis reports, completed 8D reports, and generated summary reports within required timeframes.
- Followed up on corrective and preventive actions to ensure completion.
- Prepared documents for internal and external audits.

Key Result Area: Supplier Related Activities

- Supported internal and external audits related to supplier processes.
- Issued non-conformity reports for abnormal findings with materials/raw materials.
- Participated in investigations, reviewed, and approved investigation reports.

Key Achievement:

- Data Analysis and Qualitative Research: Utilized data analysis techniques to identify trends and patterns, resulting in an 80% reduction in contamination waste through material improvements and changes on the U machine.

YOKOHAMA Tires Manufacturing Co., Ltd. | Thailand **Feb 2016 - Jun 2017**
TECHNICAL CLAIM ENGINEER

Key Result Area: Customer Related Activities

- Managed Technical Claims from overseas and OEM customers, focusing on improving and developing processes including Process Mixing, Material Preparation (such as Extruder machine, Textile calendar, Belt bias cutter, Uniformity and Dynamic balance machine, and Bladder injection), Building, Curing, and Finishing processes of Truck, Bus, Passenger car, and light truck tires.
- Facilitated meetings to disseminate information to relevant sections.
- Tracked production lot flow for detecting production abnormalities.
- Reviewed and adjusted Standard Operating Procedures (SOPs), Failure Mode and Effects Analysis (FMEA), and Control plans to align with actual processes.
- Conducted investigations by reviewing Tire structure, Tire specifications, and Simulation tests to identify root causes and problems.
- Analyzed root causes and deviations using tools such as the 4M method and collaborated with relevant sections to develop corrective actions and countermeasures (e.g., Why Why analysis, 8D, FMEA, Control plans, SOPs, Criteria).
- Issued Nonconformity Reports and reviewed all production documents.
- Generated Technical Quality Claim Sheets (TQIS) and communicated with Yokohama Rubber Company (YRC) headquarters in Japan to follow up on issues.
- Monitored system KPIs and ensured compliance with ISO 9001:2008, ISO 14001, ISO/TS 16949:2009, and OHSAS 18001:2011 standards.
- Conducted thorough competitor benchmarking, particularly analyzing tire structure and properties within the market segment. Leveraged benchmarking insights to drive the development and refinement of our product line, ensuring it remains competitive and aligned with market standards.

Key Achievement:

- Product Design Development: Successfully implemented structural improvements to tires, resulting in a significant reduction of Bumpy side (bulge) scrap by 37.69%.

KPN Sakaguchi Co., Ltd. | Thailand **May 2015 - Jan 2016**
NEW MODEL ENGINEER

Key Result Area: Customer Related Activities

- Managed data analysis and interpretation for part new model development, focusing on Metal Stamping and Assembly of Seatbelt and Airbag components.
- Tracked tooling status and updated Tooling Progress Sheet, conducted performance tests on new model parts, and optimized drawings and jigs for production within specifications.
- Executed Product Part Approval Process (PPAP), Process Quality Control Table (PQCT), Process Failure Mode and Effect Analysis (P-FMEA), Measurement System Analysis (Gage Repeatability & Reproducibility), and Process Capability (Ppk, Cpk).
- Reported data on the International Material Data System (IMDS) platform.
- Ensured compliance with inspection standards, analyzed dimension and performance test results, and maintained inspection manuals.
- Responded to quality methodologies including 8D, 5 Why, 4M, Engineering Change Request (ECR), Process Change Request (PCR), and Supplier Concessive Request (SCR).
- Conducted audits on new model processes and summarized findings into audit check sheets, requesting countermeasures from suppliers.

- Prepared audit check sheets for customers, supported audit documentation, and followed up on corrective and preventive actions from relevant sections.

Key Achievement:

- Successfully managed part new model development across 7 processes, ensuring adherence to quality standards and implementing effective problem-solving methodologies.

PERSONAL PROJECTS

ETL Pipeline from The Movie Database (TMDB) website | Python, pandas, API, JSON

- Established a secure and efficient ETL pipeline for collecting, exploring, and transforming movie data.
- Enhanced dataset by creating new columns, such as cleaned language, production country, and granular genre information.
- Ensured security by separating the API key from the source code.
- Resulted in a well-organized dataset ready for analysis and machine learning applications.

Stock Prediction by LSTM | Python, Keras, Tensorflow

- Orchestrated deployment of Tesla Inc. stock price prediction model using LSTM, showcasing expertise in deploying deep learning models with Python, Keras, and Tensorflow.
- Processed and analyzed historical stock data from Yahoo Finance, focusing on OHLC (Open, High, Low, Close) average as a pivotal indicator for prediction.
- Collaborated in implementing a two-stacked LSTM layers with one dense layer architecture, training the model on historical OHLC average prices for a 90-day forecast.
- Assisted in evaluating model performance using RMSE metrics, identifying overfitting concerns while achieving a noteworthy 95.79% accuracy in predicting future stock price trends.
- Contributed to translating complex financial data into actionable insights, offering valuable information for quantitative traders to make informed decisions in the dynamic stock market environment.

Python Sentiment Analysis with NLTK Transformers Pipeline | Python, pandas, numpy, matplotlib, seaborn
This Python project utilizes NLTK for sentiment analysis on Amazon reviews. It involves data loading, model implementation (like Roberta Pretrained Model), and comparison of sentiment scores. It showcases examples of positive 1-star and negative 5-star reviews, and includes an extra segment on using Transformers Pipeline for sentiment analysis.

Credit Card Transactions Fraud Detection | Python, pandas, NumPy, scikit-learn, KNN
The project aimed to detect fraudulent activities in credit card transactions. It involved data preprocessing, exploratory analysis, and modeling using algorithms like KNN, Gradient Boosting, and Logistic Regression. The project concluded with the identification of effective fraud detection models for banking applications.

CERTIFICATIONS

• ISO 90001, ISO/TS 16949:2009, IATF 16949:2016
• ISO 14001, OHSAS 180001:2007, ISO 450001:2018
• Measurement System Analysis for ISO/TS 16949:2009
• Techniques Analysis Problem 5 Why and 8D and 5Gen for engineer and supervisor
• QC Story Techniques
• 5S for New Hired Operators
• Lotus notes for Operator
• Quality Metrics
• Labor Law and HR Techniques for People Management
• Requirements BRC Global Standards Packaging and Packaging Materials
• BRC Global Standards Packaging and Packaging Materials Issue 5 Internal Audit
• Internal auditor for ISO9001, ISO14001, ISO50001 and OHSAS 18001
• International Online Academy on “International Economic Law”, Thammasat University
• Influencer Course by PacRim
• Hue color test Superior level
• The Production Part Approval Process (PPAP)
• Failure Mode and Effect Analysis (FMEA)
• Process capability analysis
• Concur Getting Started
• Fire Evacuation drill
• Emergency Control Team Course
• Gage Repeatability and Reproducibility (GR&R)
• Certification of Influencer Course by PacRim (2020)
• Certification of Techniques Analysis Problem (2018)
• Certification of International Online Academy on “International Economic Law” (2019)
• Certification of Failure Mode and Effect Analysis and Process capability analysis (2020)
• Certification of BRC Global Standards Packaging and Packaging Materials Issue 5 Internal Audit (2018)
• Certification of Internal auditor for ISO9001, ISO14001, ISO50001 and OHSAS 18001 (2022)

• Certification of Data Analytics: Part 1 Foundations (2023)
• Certification of Data Analytics: Part 2 Extending and Applying Core Knowledge (2023)
• Certification of Advanced NLP with Python for Machine Learning (2023)
• Certification of AI Accountability: Build Responsible and Transparent Systems (2023)
• Certification of Learning Amazon SageMaker (2023)
• Certification of Amazon Web Services Machine Learning Essential Training (2023)
• Certification of Power BI: Integrating AI and Machine Learning (2023)
• Certification of AI Algorithms for Gaming (2023)
• Certification of Machine Learning with Scikit-Learn (2023)
• Certification of Python Libraries for Data Science (2023)
• Certification of Build Advanced Charts in R (2023)
• Certification of Building and Deploying Deep Learning Applications with TensorFlow (2023)
• Certification of Deep Learning: Model Optimization and Tuning (2023)
• Certification of Machine Learning Foundations: Calculus (2023)
• Certification of TensorFlow: Neural Networks and Working with Tables (2023)
• Certification of TensorFlow: Working with NLP, Natural language processing (2023)
• Certification of PyTorch Essential Training: Deep Learning (2023)
• Certification of Transformers: Text Classification for NLP using BERT (2023)
• Certification of Data Science with Python (2024)
• Certification of Business Analytics with Excel (2024)
• Certification of Tableau Training (2024)