Kanangnut Siriphool

Mobile: +66807219006 | Email: kanangnut.s@gmail.com | Location: Thailand

SUMMARY

Experienced Data Analyst and Quality Engineer with 4.5 years each in chemical and automotive industries, driving product enhancements, cost savings, and compliance. Skilled in data analysis, project management, and process improvement. Proficient in SQL, Python, Tableau, Power BI, and more. Expertise in bioreactor batch, chromatography, and metrology tools. Strong problem-solving and analytical skills, dedicated to operational efficiency and business growth.

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.

Relevant Skill & Courses
Bioprocess engineering is a specialization of biotechnology, biological engineering and chemical engineering. It deals with the design and development of equipment and processes for the manufacturing of products such as Food, Feed, Pharmaceuticals, Nutraceuticals, Chemicals, Polymers and Paper from biological materials (such a PHA, PHB, PLA). Including to work of Mechanical, Electrical, and Industrial engineers to apply principles of their disciplines to processes based on using living cells or subcomponent of such cells.

In a university, I study about Principle and Calculations, Unit Operation, Engineering Kinetics, Engineering Materials, Biomaterial, Engineering Statistics, Engineering Mechanics, Engineering Drawing, Bioprocess Engineering Design, Thermodynamics for Bioprocess Engineer, Chemical Engineering Analysis Numerical Methods, Application Mathematic Method for Model in Chemical Engineering and Process Dynamics Control in Chemical Engineering.

SKILLS

Core Skills: Data Analysis, Requirements Gathering and Analysis, Business Process Modeling, Data Visualization, SQL and Database Querying, Project Management, Process Improvement, Market Research, Data Processing, Business Case Development, Machine Learning Algorithms and Techniques
Languages: Python, SQL, R, JavaScript, CSS, and HTML
Database: MySQL, MSSQL, PostgreSQL
Data Visualization Tools: Tableau, Power BI
Frameworks and Libraries: API, TensorFlow, Keras, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn
Developer Tools: Git, Jupyter Notebook, PyCharm, Docker
Operating Systems: Windows, UNIX (with experience in Linux and MacOS)

WORK EXPEROENCE

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

- Utilized statistical analysis and data-driven methodologies to conduct rigorous quality control (QC) testing of products in mass production and during new prototype development, informing decisions on product release or rejection.
- Employed statistical methods and data visualization tools to execute QC analysis of finished products, extracting insights and identifying trends to enhance quality assurance processes.
- Utilized the Advanced Networking Terminal Application to analyze and edit wafer maps for wafers with server defects, applying data visualization techniques to identify root causes and communicate findings effectively.
- Conducted routine maintenance tasks in the laboratory environment to ensure data integrity and instrument reliability, contributing to the seamless operation of data analysis processes.
- Maintained meticulous records, prepared detailed reports, and drafted correspondence regarding data analysis findings and quality control processes, facilitating clear communication and documentation of results.

- Managed and documented equipment in the Early Warning System (EWS) laboratory, promptly addressing anomalies or technical issues to uphold the integrity of data analysis operations.

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.

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: Leveraged advanced data analysis techniques to optimize product performance, analyzing datasets of over 1 million records. This resulted in a significant increase in production efficiency, extending the shutdown period of a SAN reactor from 1 month to 3 months.
- 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, analyzing extensive datasets to address Alpha-Methyl Styrene Acrylonitrile contamination. This proactive initiative eliminated instances of off-grade products and led to 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 digital transformation projects, overseeing the migration of internal documents from Lotus Notes IBM database to the global intranet. Utilizing data-driven insights, this initiative improved accessibility and collaboration among team members.
- Regulatory Compliance and Global Standardization: Spearheaded projects to ensure regulatory compliance and global standardization, analyzing extensive datasets to implement changes in EU food contact amendments and customer declarations. 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

- Implemented quality control processes for plastic packaging straw production, leveraging data analysis techniques to validate new models and improve production efficiency.
- Conducted inspections, tests, and sampling procedures, utilizing statistical analysis to maintain quality standards across materials and products.
- Utilized key performance indicators (KPIs) such as Equipment Effectiveness (EE) and Process Waste to identify areas for improvement and drive optimization initiatives.
- Executed testing procedures and generated certificates of analysis (COA) using data-driven insights.
- Developed work instructions and documentation to streamline operational processes and ensure compliance with quality standards.
- Managed defect reduction initiatives and provided monthly monitoring reports, utilizing data analysis to track progress and identify opportunities for further improvement.
- Implemented corrective and preventive actions based on data analysis of quality problems, contributing to waste reduction and improved production efficiency.
- Ensured compliance with quality standards and regulatory requirements, including WCM, ISO9001, ISO14001, OHSAS18001, ISO45001, BRC, and FDA, through data-driven auditing and review processes.
- 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 customer complaints, leveraging data analysis techniques to identify root causes and implement corrective actions.
- Conducted on-site investigations at customer sites, utilizing data analysis to address issues and optimize product performance.
- Prepared analysis reports and 8D reports within required timeframes, utilizing data-driven insights to drive continuous improvement.
- Followed up on corrective and preventive actions to ensure customer satisfaction and product quality.
- Prepared documentation for internal and external audits, utilizing data analysis to demonstrate compliance with quality standards and regulatory requirements.

Key Result Area: Supplier Related Activities

- Supported internal and external audits related to supplier processes, utilizing data analysis to assess supplier performance and identify areas for improvement.
- Issued non-conformity reports for abnormal findings with materials/raw materials, leveraging data analysis to drive supplier quality improvement initiatives.
- Participated in investigations and review processes, utilizing data analysis to ensure timely resolution of supplier-related issues.

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.

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.

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)