# KAMAL PATEL

55 Brookside Ave, New Brunswick, NJ - 08901

(929) · 353 · 1008 kamal.patell@rutgers.edu www.linkedin.com/in/kamalpatel

#### **EDUCATION**

## Rutgers, The State University of New Jersey • New Jersey

Master of Science, Industrial & Systems Engineering

Relevant Courses: Data Mining II; Systems Data Analytics; Production Analysis; Project Management; Lean Six Sigma, Quality Management; Supply Chain Engineering, Simulation of Production Systems.

Certification/Affiliation: Lean Six Sigma Green Belt, Institute of Industrial and Systems Engineers – Rutgers Chapter

#### **New York University**

Master of Science, Mechanical Engineering

Relevant Courses: Applied Mathematics, Thermal Engineering, Mechanics of Material, Design of HVAC, Optimal Control Robotics

#### SKILLS

Process Improvement	Kaizen, 5S, Six Sigma, SPC, Value Stream Mapping, Poke-Yoke, Continuous Improvement
Software Proficiency	AutoCAD, Flexsim, SolidWorks, PTC Creo, ANSYS, MS Project, Visio, AnyLogic
Data Analysis Tools	Python(Pandas, NumPy, Scikit-learn), MATLAB, R, Tableau, PowerBI, SQL, Minitab, GCP, SPSS, Minitab

#### WORK EXPERIENCE

**Kismet Technologies** 

Industrial Engineer Intern

- Revamped batch manufacturing data tracking with PowerApps, boosting R&D efficiency by 11%.
- Built performance dashboard in **PowerBI** to track production KPI's, increased Overall Operation Effectiveness (OOE) by **15%**.
- Authored **SOPs** for batch acceptance testing, implemented product recall procedures and developed production schedules.
- Initiated the first production schedule for nano-surface coating, ensured quality compliance with ISO 9001 standards.
- Integrated Katana MRP software for inventory management and generated monthly operational reports.

#### Mareana: Industry Collaboration Project

Project Head

- Managed and coordinated a team of four, ensuring clear communication and task delegation to meet project deadlines.
- Analyzed simulation data in Minitab, identified production bottlenecks and proposed improvements for turbine production.
- Evaluated and performed FlexSim simulation, identified bottlenecks, optimized line balancing, reducing cycle time by 23.5%.

## Susha Founders and Engineers

Manufacturing Engineer Intern

- Conducted time study for assembly processes for 2 production stages, reduced production time by 8%.
- Examined inventory data using VLOOKUPs and Pivot Tables to forecast new reorder level and EOQ.
- Enforced 5S principle for tool accessibility and safety, rearranged tool crib for space optimization increasing productivity by 10%.
- Maintained monthly reports of OEE, production reviews and Improvements reports.
- Supported facility team with layout, development and PFMEA documentation to improve process quality.

## ACADEMIC PROJECTS

#### **Bicycle Sales Customer Segmentation (dashboard)**

- Crafted a dynamic dashboard for East Australia region, identifying key customer segments and product preferences. Optimized data management, reducing load time by 20%.

## Process Improvement of Cell Therapy Manufacturing

- Directed a cross-functional team of four to apply the DMAIC methodology to optimize the CAR-T cell manufacturing process.
- Analyzed root causes, created Ishikawa and FMEA diagrams, and presented strategies in reducing patient wait time by 10%.

# Loan Default Risk Prediction (report)

- Preprocessed 300K loan applications addressing missing values, anomalies, and outliers using python exploratory data analysis.
- Built XGBoost and LigthGBM model, achieved best leading AUC score of 74.37% with LightGBM, nearing the top-performing score of 79.5% on Kaggle competition.

# Pattern Visualization for 9 years of US Vehicle Accidents (report)

- Investigated 2.8M US accidents from 2016-2022 using EDA and studied impact of environmental stimuli on traffic behavior.
- Performed extensive patterns analysis using R & ggplot2 to identify safety risks and proposed data-driven policies for road safety.
- Developed interactive visualizations in **Tableau** and built a web app using **Streamlit** for 800K data points.

## LEADERSHIP

# Lead Mechanical Engineer - NYU Autonomous Vehicle

- Led a team of 10 engineers in the design and development of a self-driving vehicle, achieving 3rd place at the IGVC'18 Competition.
- Led the procurement and sponsorship team, demonstrated proficiency in assembly, wiring, and hardware setup, which resulted in a 17% reduction in installation time.
- Designed CAD models in SolidWorks for sensor mounts, electronics housings, and structural supports. Prototyped with 3D printers and manufactured using hand/shop tools, drilling, laser cutting and welding.

Dec 2021 - May 2022

Nov 2022 - Dec 2022

May 2023 - Aug 2023

August 2022 – May 2024

GPA: 3.8/4.0

Oct 2023 - Dec 2023

Oct 2023 - Dec 2023

# Sep 2022 - Dec 2022

Sep 2017 - July 2019

Oct 2023 - Dec 2023