CHRIS DSILVA

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Engineer with 2 years of experience in process optimization and data-driven enhancements, leveraging Lean/Six Sigma, SAP, and advanced analytics to drive efficiency and compliance in the industry.

EDUCATION

Rutgers University, New Brunswick, New Jersey (*GPA: 3.833*) **Sep 2022 – May 2024**

- Master of Science in Industrial and Systems Engineering
- Relevant Coursework: Data Analytics for Engineering Systems, Supply Chain Engineering, Quality Management, Simulation of Production Systems, Project Management, Risk Analysis and Mitigation, Production Analysis

Princeton University, Princeton, New Jersey **Sep 2023 – Dec 2023**

- ORF 535 Financial Risk and Wealth Management

University of Mumbai, Mumbai, India **Jul 2016 - May 2020**

- Bachelor of Engineering in Mechanical Engineering

WORK EXPERIENCE

Hikma Pharmaceuticals (Compounding 503B) – Graduate Engineering Intern **May 2023 – Aug 2023**

- Devised and managed a calibration and validation strategy for over 50 types of equipment, transitioning from Excel to Blue Mountain software to enhance forecasting accuracy, significantly improve operational reliability and compliance, and reduce regulatory risks in line with FDA/DEA standards
- Led and executed Installation, Operational, and Performance Qualification (IOPQ) for new equipment, enhancing reliability by 10% through effective collaboration with QA and manufacturing teams; authored comprehensive protocols for 14 key injectables to uphold high-quality standards
- Identified and resolved manufacturing issues, including equipment malfunctions and procedural deviations, maintaining operational excellence and minimizing downtime through targeted interventions and quality assurance measures

Accutech Power Solutions – Mechanical Engineer (Mumbai) **Jan 2022 - Jul 2022**

- Streamlined repair processes and redesigned production line layouts using lean manufacturing and AutoCAD, reducing repair times by 5% and boosting production efficiency
- Optimized supply chain operations by redesigning warehouse management practices, and improved scheduling and inventory management, leading to a 10% increase in workflow efficiency
- Conducted root cause analysis using Fishbone diagrams, and the 5 Whys method, identifying and addressing inefficiencies, resulting in a 10% reduction in downtime

Jude Electronic Products - Production Engineer (Mumbai) **Nov 2020 - Dec 2021**

- Led a 6-member production team to implement just-in-time (JIT) inventory strategies and demand forecasting, significantly reducing stockouts and overstocks. Streamlined inventory management and improved overall operational efficiency by 20% through the additional implementation of 5S strategies

KEY PROJECTS

Fraud Detection in Supply Chains Using Kolmogorov Arnold Networks (*link*) **May 2024**

- Developed a fraud detection model using Kolmogorov Arnold Networks (KANs), achieving 99% test accuracy and significantly enhancing fraud detection capabilities
- Conducted a detailed comparison between KANs and Multi-Layer Perceptrons (MLPs), demonstrating KANs' superior interpretability and adaptability with learnable activation functions *Read Article*
- Achieved train and test accuracies of 90.4% and 99%, respectively, showcasing the potential of KANs in high-stakes sectors like pharmaceuticals and manufacturing

Princeton University

Financial Analysis and Strategy Consulting Report (*link*) **Sep 2023 - Dec 2023**

- Created a comprehensive financial analysis for a $1.5M condo purchase, utilizing Monte-Carlo simulation to project a $500k down payment growth. Evaluated various 10-year investment strategies, including a 70/30 SPY/TLT allocation, considering a 25% capital gains tax rate. Assessed feasibility over 5, 7, and 10-year periods and analyzed impacts of fluctuating salary growth rates and investment returns. Developed dynamic investment recommendations adaptable to evolving financial goals and market conditions, emphasizing a client-centric approach

Rutgers University

Solar Canopy Project Proposal (Eng. Economics) (*link*) **Sep 2023 – Dec 2023**

- Developed a comprehensive engineering project proposal for a solar canopy project, using Monte Carlo simulations to generate mean costs along with the 5th and 90th percentiles and making recommendations based on the NPV, IRR, and PW, finally considering tax and social aspects of building the project

PROFESSIONAL AFFILIATIONS

- Member of the Institute for Operations Research and the Management Sciences (INFORMS) Chapter at Rutgers New Brunswick **Jan 2023 – Present**
- Member, Rutgers Alpha Pi Mu Honors Club for Industrial and Systems Engineering - Recognized for academic merit and dedication to the field **Dec 2023 - Present**

CERTIFICATES & SKILLS

- Lean Six Sigma Green Belt CFQ International LLC and IISE Rutgers Chapter **April 2024**
- Flexsim, MS Office (Excel, PowerPoint), AutoCAD, SolidWorks, Ansys (Mechanical APDL), Tableau, Arena, Power BI, SQL, Programming: Python, R, MATLAB, SAP