

Aranya Kundu

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🔗 PROFESSIONAL SUMMARY

Technical Product Manager with expertise in **product lifecycle management** and **cross-functional collaboration**. Adept at executing **product roadmaps** and integrating software solutions to meet customer needs. Skilled in applying **agile methodologies** and **scrum principles**, with a strong focus on leveraging data science and business analytics to drive **data-based decision-making**. Proficient in developing and presenting impactful **business intelligence dashboards** utilizing **machine learning algorithms** and techniques. Holds a Master of Science in Business Analytics from a globally reputed US university to add an additional layer of analytical expertise and **strategic thinking**. Dedicated to deliver tangible value by combining technical literacy, a strategic business vision, and harnessing emerging technologies such as **Big Data Analytics** and **Artificial Intelligence**. Seeking opportunities in Technical Product Management and Product Owner roles to drive innovation and contribute to organizational success.

🏢 WORK EXPERIENCE

University of Notre Dame

Notre Dame, IN, United States

Research Assistant

Sep 2022 - May 2023

Project 1: Natural Language Processing

- Researched various **state-of-the-art frameworks** for training big text data analyzing their advantages and disadvantages.
- Implemented the **BERT framework** using **TensorFlow** and **PyTorch** on **50 gigabytes** of text datasets of earnings call data, computing anomaly scores to detect unusual patterns.
- Developed a python module to compute **anomaly scores and prescience** in text scripts, leveraging **cosine similarities**.

Project 2: Current Expected Credit Loss (CECL) - NFT Transactions

- Achieved 70% accuracy in Ethereum price forecasting by programming Time Series Models using Python and R.
- Improved decision-making by developing interpolation based systems to convert Ethereum prices to USD and predict **current expected credit loss (CECL)**.
- Generated actionable insights through **exploratory data analysis**, identifying patterns and relationships in 65 different collection performances based on numerous key performance indicators.

NTPC Limited - System Operations & Commercial

New Delhi (DELHI), INDIA

Product Manager

July 2020 - June 2022

- Achieved responsibility of **product manager**, to create analytical bridge from ground up between operations and commercial departments through utilization of **data science** and **business intelligence**.
- **Directed data analytics projects** from concept to launch, to provide **business insights** and improve **decision making** for 70 Giga Watts power plant operations and pricing strategies by analyzing operations and commercial data.
- Devised **product development strategy** by conducting **benchmarking studies**, tracking industry trends, and gaining insights on competitors and international best practices to drive product differentiation.
- Demonstrated **entrepreneurial mindset** by pioneering cross-border energy trade project with neighboring countries, **expanding to newer markets**, revitalizing the company's position as the 2nd largest electricity trader in the country.
- Implemented **A/B Testing**, financial analytics and demand forecasting models to optimize power plant operations, achieving 90% accuracy in tariff determination and profit maximization.
- Spearheaded **business process improvement** by monitoring implementation of robotic process automation (RPA) resulting streamlined operations and enhanced productivity in 3 business areas.
- Mentored a 7-member team, ensuring 24X7 continuous control room operation necessary for seamless energy trade.

Data Analyst

- Deployed a web-based platform integrated with trading API in collaboration with the IT team, enabling 11 B2B customers to access real-time financial, operational, and strategic insights while maintaining **data governance**.
- Optimized fund utilization worth 1 billion INR leveraging **lean methodologies** coupled with **machine learning** and **predictive analytics**, leading to enhanced financial efficiency and resource allocation.
- Achieved strategic objectives by collaborating closely with cross-functional teams, providing strategic guidance and **analytical insights** in the areas of business strategy, **program management** and **newer product initiatives**.
- Defined **value streams** and showcased analytical excellence by designing prototypes of scalable **business intelligence tools** utilizing Python, SQL, R and Tableau.
- Designed excel and VBA based financial models and presentations by analyzing **financial statements** of companies to help top management with **investment decisions** and **execution roadmaps** in new businesses.

🎓 EDUCATION

University of Notre Dame

IN, United States

Master of Science | Business Analytics | GPA: 3.70/4.00

2022 - 2023

NTPC School of Business (mentored by IIM Ahmedabad)

Noida (UP), India

PGDM | Energy Management | GPA: 3.36/4.33

2018 - 2020

Indian Institute of Engineering Science and Technology

Kolkata (WB), India

Bachelor of Technology | Electrical Engineering | GPA: 8.00/10.00

2014 - 2018

SKILLS & CERTIFICATIONS

Management Skills:	Product Management, Product Development Lifecycle, Service Level Agreements (SLA), A/B Testing, JIRA, Agile Methods, Scrum Principles, Marketing, Positioning, Project Management, Financial Models, Go-to-Market (GTM) Strategies, Client Relations, CI-CD Pipelines
Interpersonal Skills:	Collaboration, Communication, Stakeholder Engagement, Feedback and Quality Assurance, Team Management
Operational Skills:	Total Quality Management (TQM), Kaizen, Six Sigma, Lean Training, Process Optimization, MIS Reporting, SOP Documentation, Troubleshooting, Root Cause Analysis, Value Stream Mapping
Business Intelligence:	Tableau, Power BI, Advanced Excel, Shiny, Shiny for Python, Streamlit
Programming Skills:	SQL, Python, R Programming, VBA, HTML, CSS, JavaScript, C/C++
Python Modules:	TensorFlow, Keras, PyTorch, OpenCV, Pandas, Numpy, Scikit-Learn, Matplotlib
Cloud Environment:	Azure Data Studio, Kubernetes, Looker, GCP
Developer Tools:	Jupyter Notebook, Visual Studio Code, R Studio, PyCharm, Azure Data Studio
Certificates:	Google Data Analytics Professional Certification, Six Sigma Green Belt Certificate

INTERNSHIPS & PROJECTS

Trifecta Recognition Dashboard | *Streamlit, Python* | [Demo Link](#) March 2023

- Programmed a multi-page Dashboard based on Python Streamlit module featuring text analysis, image recognition and speech recognition utilizing advanced libraries such as TensorFlow, Keras, Pytorch, and Speech Recognition.
- Integrated a chatbot with the dashboard that enables users to seamlessly perform complex tasks through audio commands.

Energy Generation Forecast App | *R, Shiny* | [Demo Link](#) February 2023

- Developed and programmed an interactive multi-page user dashboard using Shiny, allowing users to customize parameters and compare the performance of different time series models for accurate predictions of renewable energy generation at any future time.
- Enabled users to draw insights by predicting the time required to achieve any percentage of renewable energy penetration in the United States.

ML based FIFA transfers App | *R, Shiny* | [Demo Link](#) November 2022

- Leveraged Shiny framework to build the dashboard that compares different machine learning models to compute the over all rating, transfer prices and best playing positions for any soccer player.
- Created an interactive dashboard that allows users to customize parameters and compare performance of the models.

E-commerce trade growth prediction dashboard | *R, Shiny* | [Demo Link](#) October 2022

- Designed a Shiny based visualization dashboard that uses different basic and advanced machine learning and time series models to predict the profit and sales growth of a global e-commerce superstore.
- Created an engaging and interactive dashboard, featuring multiple visualization options to facilitate user-driven insights.

Quant-based Investment Strategy GUI | *Python, Tkinter* | [Demo Link](#) September 2021

- Designed a user-friendly Graphical User Interface (GUI) using Tkinter to assess investment strategies tailored to cost-benefit analysis based on portfolio size leveraging sandbox data for S&P global top 500 companies.
- Methods used for evaluating portfolio performance were Equal Weights, Quantitative Value and Quantitative Momentum.

Swappable batteries for 2W/3W Electric vehicles | *MS Excel, Powerpoint, VBA* November 2019

- Drafted a business model on Swappable batteries for 2W/3W electric vehicles based on analysis of survey data of 200 2W/3W electric vehicle users to understand the demand of battery swapping.
- Catered to the delivery boys of different restaurant aggregators, ride-hailing companies, and logistics companies.

Internship at NTPC Ltd. – Corporate Commercial | *MS Excel, Powerpoint, VBA* | [Demo Link](#) July 2019

- Worked on a project to optimize costs for a thermal-based power generation facility. Developed an excel and VBA-based analytical tool that can be availed for revenue maximization by cost reduction up to 2 cents/unit.
- Designed an advanced excel and VBA-based decision-making model for determining tariff with respect to state-wise regulations for all 29 states and 7 UTs for a typical solar power plant.
- Extended the model to analyze for tariff determination through competitive bidding routes and check for financial feasibility.

ACHIEVEMENTS

- Graduated with *Latin honors Cum Laude* from the **globally prestigious University of Notre Dame**, United States, 2023
- Scored **320 in GRE** and in **IELTS 8.0/9.0** in 2022
- Valid **US Visa and Work authorization in the United States** without any sponsorship requirement (valid till 2027)
- Winner at ConSig, an article writing competition organized by IIT Bombay, 2019
- Winner at Insignia, a B-plan competition by XavComSociety at national level at St. Xavier's College, Kolkata, India, 2015
- **Silver Medal** Awarded by Eastern Railway Women's Welfare Centre, India for excellent performance at School leaving exam, 2013