Preetam Roy

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Professional Summary

Data and process analytics professional with an MSc in Computer Science and 3+ years across operational analytics, process improvement and BI reporting for global BFSI teams. Microsoft Certified Power BI Data Analyst (PL-300) and Lean Six Sigma Green Belt. Writes SQL across joins, CTEs and window functions against 50K+ monthly records, and built Power BI reporting on 15+ operational KPIs that cut SLA breaches by 18% and removed 35% of manual reporting effort. Builds the analysis as well as the dashboard — author of **opslab**, an open-source toolkit implementing process mining, statistical process control and right-censored survival models for back-office operations.

Education & Certifications

Queen Mary University of London — MSc Computer Science — London, UK · 2022
Heritage Institute of Technology — BTech Computer Engineering — Kolkata, India · 2021
Microsoft Certified: Power BI Data Analyst Associate (PL-300) — Microsoft — Jan 2026
Lean Six Sigma Green Belt — Tata Consultancy Services — Jul 2026

Experience

Tata Consultancy Services Ltd — Kolkata, India — May 2025 – Present
Business Process Lead — Data Analytics

- Led data-driven process optimisation for the NEST Pensions project, analysing 50K+ monthly operational records in SQL and Excel to improve workflow efficiency by 22%
- Developed Power BI dashboards tracking 15+ operational KPIs, enabling leadership to reduce SLA breaches by 18%
- Built and deployed **Agent Journey Mapping**, a Python pipeline consolidating five sources — WFM roster and milestones, QnT audit scores, CSAT, training records and the agent master — into a single per-agent event table, replacing four manual file pulls with one screen for team leaders across 300 agents
- Engineered an ID crosswalk reconciling employee identifiers across systems with an automated exception report, and deterministic performance flags (declining and stalled thresholds with hysteresis to suppress flag flicker) benchmarked against tenure-matched cohort baselines
- Delivered the output as a self-contained interactive HTML dashboard with inlined Plotly plus an Excel export published to SharePoint, requiring no server, licence or client-side install on a locked-down corporate network
- Built a **DSAT allocation and de-allocation engine** that distributes dissatisfaction cases across auditors with workload balancing and self-review exclusion, cutting weekly allocation effort by 50%
- Applied Lean Six Sigma and exploratory data analysis to identify recurring bottlenecks, improving issue resolution speed by 25%
- Automated recurring operational reports and KPI monitoring workflows, cutting manual reporting effort by 35%
- Gathered reporting requirements from business stakeholders, documented process flows, and translated operational needs into analytics deliverables

Diligenta Ltd — subsidiary of TCS, Peterborough, United Kingdom — Mar 2024 – Jan 2025
Quality & Training Coordinator — Data Analytics

- Analysed 100K+ customer interaction records to identify service performance trends and improvement opportunities
- Built automated Excel and Power BI dashboards monitoring customer satisfaction, handling time and operational KPIs
- Conducted statistical analysis of handling and resolution metrics across 12 teams, improving average resolution time by 17%
- Delivered training programmes to 40+ new hires using analytics insights, improving onboarding productivity by 25%

Diligenta Ltd — subsidiary of TCS, Peterborough, United Kingdom — Mar 2023 – Mar 2024
Customer Support Analyst

- Resolved 70+ customer cases weekly with a 96% satisfaction score by diagnosing technical account issues
- Used CRM analytics and Excel reporting to identify recurring support patterns, reducing handling time by 20%; collaborated with offshore technical teams on complex cases, improving first-contact resolution by 15%
- Ranked in the top 10% of a 120+ member support team on productivity and quality metrics

Projects — all four run live at the portfolio link above

opslab — operations analytics for BFSI back-office processes — *Python, no dependencies*
Open-source toolkit built on the standard library alone, so it installs on a locked-down corporate laptop. Process mining discovers the real process map from event logs, with rework loops and a four-eyes segregation-of-duties check; SPC implements all eight Nelson run rules and capability analysis; SLA survival analysis uses Kaplan-Meier and Cox proportional hazards, so cases still open count as evidence instead of being dropped — worth 6 working hours on the median in the sample; a Power BI linter applies 20 rules to TMSL and TMDL models over a real DAX tokeniser. 221 tests,

CI across three Python versions, and sample data generated from published coefficients, so the estimates can be checked against the truth.

Customer Churn Analytics *Python, scikit-learn, Streamlit*
Churn model on the 7,043-customer IBM Telco dataset reaching 0.846 ROC-AUC and 75% recall at a threshold tuned to 0.56. Accuracy is the least interesting number here — 73.5% of these customers stay, so "nobody leaves" scores 73.5%; the retention campaign returns 8.2×, and stays profitable down to a 10% offer-acceptance rate.

Handwritten Digit Recognition *Python, NumPy, MNIST*
98.48% on the standard 10,000-image test set — 152 digits wrong — from a 784-256-10 network trained in 51 seconds on two CPU cores. Preprocessing beat model choice: removing handwriting slant with an affine shear is worth +3.34 points, more than the gap between the worst and best model in the comparison.

Smart Traffic Management *Python, OpenCV, YOLOv4-tiny*
Detection and centroid tracking turning a highway camera into telemetry: 26 unique vehicles at 8.2 fps on two CPU cores. Near-field recall of 0.33 is reported rather than an overall "detection accuracy", because the clip ships without labels to measure one against.

SKILLS

SQL & Databases: Joins, CTEs, window functions, aggregations, query optimisation, data extraction and validation; MySQL, PostgreSQL, Oracle, MongoDB; data cleaning, transformation, ETL concepts

BI & Visualisation: Power BI (PL-300), DAX, Power Query, data modelling, dashboard development, KPI reporting, Plotly, self-contained HTML reporting

Automation & Scripting: Excel VBA (multi-module workbooks, UserForms, event-driven UI), Power Query M, Power Automate, openpyxl, SharePoint publishing, regex-based data extraction

Process & Business Analysis: Lean Six Sigma Green Belt, process mining, statistical process control, root cause analysis, process mapping, requirements gathering, stakeholder engagement, SLA & KPI management, report automation, UAT support, training & mentoring

Modelling & ML: Survival analysis (Kaplan-Meier, Cox PH), EDA, feature engineering, model evaluation, machine learning, computer vision (OpenCV, YOLO)

Languages: SQL, Python, VBA, Java, C, C++, JavaScript