

CONTACT

- Bhavna
- +65-80341259; +91-9876069984
- bhavna@u.nus.edu; bhavu1998@gmail.com
- <https://www.linkedin.com/in/bhavnalal>

EDUCATION

1. Masters in Business Analytics, National University of Singapore, Singapore (July 2024 - Present)
 - Course work: Fraud Analytics; Operations & Research; Foundations in Business Analytics; Analytics in Managerial Economics; Advanced Analytics & Machine Learning; Quantitative Risk Management; Transforming Organisations with Data Storytelling; Data Science for Online Marketplaces; Cloud Computing; Neural Networks & Deep Learning
 - Project Work: Spearheaded SamurAI, a GenAI-powered chatbot for dementia care, combining emotion detection (ResNet), speech transcription (WhisperX), and caregiver-guided RAG pipeline (Gemma) to deliver real-time support and cognitive engagement; Developed CardShield, a credit card fraud detection system using CatBoost with RandomOversampling and advanced feature engineering, integrated a large language model interface to deliver real-time fraud insights and enhance user decision-making; Developed a distracted driver detection system using advanced deep learning models (YOLOv8, ResNet50), improving real-time identification of risky behaviours, significantly enhancing driver safety and enabling proactive accident prevention; Developed a dashboard analysing customer preferences, dish profitability, and demographics to identify high-potential outlet locations, driving 20% projected revenue growth and 15% marketing efficiency improvement; Compared ARIMA, ARIMAX, XGBoost, and LSTM models to predict Bitcoin's next-day price; selected LSTM for its superior accuracy and ability to handle volatility, enhancing prediction reliability for informed investment decisions; Trained LightGBM and Random Forest models using stratified K-Fold cross-validation to handle class imbalance, then combined their predictions via a weighted ensemble, significantly improving the precision and recall of Twitter bot detection
2. Bachelors of Technology in Electrical Engineering, PEC University of Technology, India (Aug 2017 - Jun 2021)
 - Course work: Programming with C++, Electrical measurements & instrumentations
 - Project Work: Constructed a random forest model for an online topographical analysis of Covid19 symptoms using NLP, further applications include text summariser and text grader

EXPERIENCE

1. Business Analyst Intern, Zenatix Solutions, India (Jan 2020 - May 2020)
 - Led report generation using Python, PowerPoint, and Excel to analyse real-time data, identifying inefficiencies in electrical equipment and driving 60% energy savings and increased profits through preventive maintenance
 - Decreased operational time by 60% through automation of analytics process by reworking analysis platform from Excel to Python whilst devising and suggesting solutions to a wide array of clients by identifying localised effects of segmental aspects
2. Business Analyst, EXL Service, India (Jul 2021 - Dec 2022)
 - Led migration (from SAS to Python, SQL) of dashboards and reports for a key US client leading to enhanced efficiency of dashboards and reports by 80% through automation, reducing manual intervention and processing time by 50%
 - Awarded EXL Recognition Award by client for performance in Migration Project
3. Consultant, EXL Service, India (Jan 2023 - Jul 2024)
 - Led the Marketing Strategy with direct client interaction for a top US insurance company and developed monthly targeted plans using Python, SQL and Excel resulting in optimised resource allocation and higher potential buyer outreach
 - Executed a 4-step direct mail marketing process using Python, SQL, and Excel to score key metrics, suppress redundant data, and design a detailed strategy including offers and distribution frequency for two communication modes
 - Conducted ad-hoc analysis in each process cycle using Python, SQL and Excel, adapting to real-time factors for optimal strategy refinement, cutting down process completion time by 40% and transitioning it to a single-handed operation
4. Data Science Intern, Zurich Insurance, Singapore (Feb 2025 - Present)
 - Designed a property insurance dashboard with Power BI and Python, applying Medallion Architecture to provide actionable insights as per adequacy, risk scores, and hazard grades enabling leadership to optimise decisions and reduce risk exposure
 - Automated end-to-end reporting for general insurance with Python and Medallion architecture, slashing manual workload, boosting accuracy, and fast-tracking report delivery to empower data-driven decisions
 - Enhanced multiple insurance chatbots by delivering diverse ad hoc improvements, such as implementing targeted data filters to streamline query execution, reduce response time, and improve user experience

LEADERSHIP EXPERIENCE

1. Chief Editor, English Editorial Board, PEC University of Technology, India (Jan 2020 - Jun 2021)
 - Managed and lead a team of 50 executives to supervise creative writing, slam poetry and literary activities on campus
 - Curating official annual magazine by gauging administrative requirements to suit college audiences
 - Awarded Institute Color, Certificate of Excellence, Certificate of Appreciation by PEC University of Technology
2. Co-Founder, Formally Informal Podcast, PEC University of Technology, India (May 2020 - Jun 2021)
 - Led a team of 15+ members to create and implement strategies to create engaging social media content
 - Achieved 100% month-on-month viewership growth by engaging alumni and documenting diverse academic journeys

SKILLS & ACTIVITIES

1. Hard Skills

- Python
- SQL
- Tableau
- Power BI
- Machine Learning
- Generative AI
- Deep Learning

2. Soft Skills

- English
- Hindi
- French (Beginner)
- Violin (Beginner)
- Creative Writing & Poetry

CERTIFICATIONS

- Great Learning Bootcamp: Python, SQL, SAS, Machine Learning, Deep Learning, Tableau
- Kaggle: Generative AI Intensive course with Google