

Vibhuti Bajaj

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Personal Profile

Highly skilled Data Science and Machine Learning Specialist with a Master's degree in Computer Engineering. Expertise in developing and implementing machine learning models, statistical analysis, and data-driven decision-making. Proficient in Python, R, and various deep learning frameworks. Experienced in natural language processing, sentiment analysis, and advanced topic modeling techniques. Strong communication skills and a proven track record of collaborating with cross-functional teams to deliver data-centric solutions that enhance business performance.

Education

University of Guelph

Master in Computer Engineering

Guelph, ON

Jan 2023 - April 2024

Gujarat Technological University

Bachelor in Computer Engineering

Surat, Gujarat

May 2018 - May 2022

Skills

Programming

Python, R, Java, c/C++, Typescript, SQL, Bash/Shell, HTML/CSS, TypeScript, jQuery, Git version control, CI/CD.

Data Science and Analytics

Tableau, Power BI, Analytics, Data Wrangling, Predictive Modeling, Time Series Analysis, Statistical Forecasting

Deep Learning

Cloud Technologies, CNN, RNN, LSTM, Attention Models, Transformers, BERT, Keras, PyTorch, Autoencoders, TensorFlow, Graph Neural Networks (GNN), Large Language Models (LLM), Diffusion Models, Transfer Learning.

Soft Skills

Collaboration, Communication, Problem-Solving, Experimental Design, Analytical Thinking, Data-Driven Decision-Making, Cross-Functional Stakeholder Management, Documentation.

Work Experience

Graduate Teaching Assistant

Sept 2023 - April 2024

University of Guelph

Guelph, Ontario

- Delivered workshops on risk analysis techniques, cloud infrastructure, and data-driven decision-making, improving students' proficiency in advanced risk modeling, compliance monitoring, and cloud-based analytics.
- Delivered seminars and mentorship on Cloud Infrastructure, NLP, ETL, and business intelligence, boosting students' technical proficiency and data-driven problem-solving skills by 30%, leading to improved project outcomes.

Graduate Machine Learning Research Assistant

May 2023 - August 2023

University of Guelph

Guelph, Ontario

- Utilized the Twitter API and web scraping techniques to gather a large dataset, followed by comprehensive data cleaning and preprocessing for insightful analysis.
- Led data-driven research on social dynamics using NLP and sentiment analysis, Topic Modelling (LDA) extracting insights from large unstructured datasets. Conducted in-depth risk analysis on community engagement, contributing to advanced understanding of social risk factors in community structures.
- Facilitated seminars on emerging technologies such as NLP, ETL processes, data pipeline development, and cloud computing platforms to share insights.
- The research provided a deeper understanding of how fandoms offer social support, offering actionable insights for community-building strategies and enhancing academic discourse in this area.

Business Strategy Analyst

May 2022 - August 2022

RedcarpetUp

Remote, India

- Led a team of analysts to leverage risk indicators, advanced data analytics, Python, and SQL for uncovering lending trends, defaulter patterns, and fraud detection. Enhanced debt collection efficiency by 50%, identified duplicate accounts and fraudulent IDs, and optimized compliance with credit policies.
- Developed and implemented dynamic dashboards and risk analysis reports to monitor credit policy compliance, influence decisions across retail lending channels, and strengthen financial security.

Data Science Intern

Sep 2021 - Apr 2022

Gray Routes Technology Pvt. Ltd.

Remote, India

- Conducted in-depth time series analysis to forecast spare parts shipments, aiding in effective inventory management for the client. Utilized Python, Microsoft Excel, and Tableau for comprehensive data analysis and visualization.
- Devised and implemented a safety stock calculator for the client, enhancing inventory management practices and minimizing stockouts to improve customer satisfaction.

University Projects

Mindful Motion – Advanced Mobile Wellness App

- Spearheaded the development of a mobile app promoting holistic well-being through step tracking, BMI calculation, stress management, and personalized meal planning.
- Leveraged mobile sensors and integrated RESTful APIs for real-time data synchronization, enhancing user engagement with accurate tracking and stress assessments.
- Achieved 95% user satisfaction by optimizing UX/UI design, improving app stability by 25% with Firebase backend optimization.
- Demonstrated expertise in mobile app development, sensor integration, and API utilization for scalable and user-friendly solutions.

GI tract Image Segmentation

- Automated gastrointestinal organ segmentation using advanced CNNs (U-Net architecture) with Python, TensorFlow/Keras, and custom data preprocessing and augmentation techniques.
- Developed a custom data generator and implemented rigorous augmentation strategies to streamline training, reducing manual segmentation time, minimizing human error, and improving patient outcomes in radiation therapy through accurate medical imaging analysis and healthcare data management.