VANDANA SINHA

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CAREER SUMMARY

Accomplished Machine Learning Scientist with a robust history of developing transformative algorithms and predictive models that have significantly enhanced business operations and profitability. Recognized for increasing sales forecast accuracy by 35%, reducing fraudulent transactions by 40%, and driving a 25% uplift in customer transaction value through advanced analytics and Generative AI-driven solutions.

Areas of Expertise

Quantitative Analysis – Deep Learning Framework Optimization – Customer Behavior Insights – Data Science Methodologies – Advanced AI/ML Techniques – Performance Benchmarking & Analysis – Data-Driven Decision Making – Algorithm Development – Financial Forecasting – Adaptability & Continuous Learning – Data Quality Improvement – Collaboration & Communication

PROFESSIONAL EXPERIENCE

Intel Corporation Folsom – California, United States   May 2022 - Dec 2022
Solution Architect Intern

- **Data Science and Customer Behavior Insights:** Elevated customer satisfaction 5% and solution performance 3% through advanced Python data modeling and quantitative analysis, extracting deep customer behavior insights to boost engagement and retention. Innovated distributed training algorithm decreasing training time 10% for large-scale image classification models.
- **Strategic Integration of AI in Product Development:** Spearheaded integration of Generative AI into hardware platforms, increasing Xeon product loyalty 1% and customer engagement 2% through aligned cross-functional strategies. Optimized Deep Learning model with low-precision methods, accelerating inference speed 3% for faster real-time predictions.
- **Cross-Functional Collaboration and Problem Solving:** Diminished customer grievances 4% and amplified solution efficacy 5% by collaboratively solving challenges with data-driven, tailored solutions across business teams. Presented novel technique to optimize Deep Learning performance on resource-constrained devices for Intel's incubation program.
- Recognized by Intel for exceptional problem-solving, having devised and introduced a new process that slashed customer complaints by 20%.

CRISIL Global Research Mumbai – Maharashtra, India   Sep 2017 - Aug 2021
Senior Quantitative Analyst

- **Data Modeling:** Reduced fraudulent activities by 2% within 8 months by implementing advanced data models using Python, SQL, and R for transaction monitoring, demonstrating proficiency in quantitative analysis and data science methodologies.
- **Algorithm Development:** Drove a 5% increase in profits through the development of data-driven trading algorithms, showcasing expertise in using quantitative analysis to adapt to market dynamics and influence business strategy.
- **Financial Forecasting:** Developed a predictive analytics model that increased the accuracy of sales forecasting by 35%, directly contributing to a more efficient supply chain and inventory management system. Improved financial forecasting accuracy by applying statistical modeling techniques to identify market trends and risks, enabling strategic adjustments in fast-paced financial settings.
- Honored with Star and CLAP awards at CRISIL for exemplary performance, contributing to a 15% uplift in customer satisfaction.

Freelance – Mumbai, Maharashtra, India   Aug 2011 - Aug 2017
Data Warehouse & Digital Marketing Analyst

- **Data Quality Improvement:** Achieved a 6% enhancement in data quality by developing and applying new data cleansing methods in Informatica, leading to more accurate reporting for critical decision-making.
- **Campaign Optimization:** Increased digital marketing campaign click-through rates by 5% and improved ad budget efficiency by 2% using strategic A/B testing and thorough statistical analysis.
- **Data Accessibility:** Enhanced data accessibility by 10% and facilitated real-time KPI tracking through collaboration on automated reporting dashboards in BO and SAS.
- **Cross-Functional Reporting:** Streamlined decision-making and proactive performance optimization by incorporating diverse insights into the development and implementation of sophisticated reporting tools.

Hewlett Packard – Bangalore, Karnataka, India   Aug 2007 - Jul 2011
Software Developer

- **Data Mapping Efficiency:** Streamlined real-time issue resolution within tight deadlines by developing and executing data mapping strategies using Unix, Informatica, and Oracle.
- **Algorithm Development:** Utilized advanced programming skills to create an innovative algorithm, resulting in a 7% increase in system performance over six months.
- **ETL Integration:** Successfully integrated Informatica-ETL tools into data transformation processes within six weeks, significantly reducing downtime and boosting efficiency.
- Received widespread acclaim and numerous accolades at HP as a pivotal contributor to development and automation efforts, boosting market share by 10%.

EXTRA CURRICULAR

San Jose State University – California, United States   **Jun 2023 - Present**
Research Assistant
- Design and develop a high-performance Federated Learning (FL) data handling framework for medical data that can process 10x more data per second than existing solutions.
- Developed novel generative AI models for text and image synthesis using transformer architectures and diffusion models.
- Implemented techniques to improve fairness, safety, and responsibility in AI systems, reducing bias and harmful outputs.
- Conducted user studies to evaluate human-computer interaction and measure real-world impact.

University of North Texas Denton – Texas, United States   **Jan 2022 - May 2023**
Teaching Assistant
- Enhanced data-driven education models, leading to a 2% increase in student satisfaction and a 4% improvement in assignment performance through effective quantitative analysis and modeling.
- Leveraged statistical insights to devise personalized tutoring programs, achieving a 2% decrease in failing grades and a 1% increase in student retention, demonstrating a strong foundation in data-driven decision-making.
- Pioneered the use of gamification and flipped classroom techniques, resulting in a 2% rise in student engagement and a significant 6% boost in exam results.

EDUCATION

Master of Science, Computer Engineering – GPA 4.0/4.0   **Graduation Date – May 2023**
University of North Texas Denton – Texas, United States

Master of Science, Information Science   **Graduation Date – May 2007**
Birla Institute of Technology – Mesra Ranchi, Jharkhand, India

MEMBERSHIPS

- Attained membership in The Honor Society of Phi Kappa Phi at the University of North Texas, distinguishing myself among the top 10% academically.

TECHNICAL PROFICIENCIES

- Technical skills: Machine Learning, Natural Language Processing, Image Recognition Algorithms, Predictive Modeling, Human-AI Interaction Design ,Data Analysis, Research and Implementation of Cutting-Edge AI Technologies, AI Model Training and Optimization, Product Development
- Soft skills: Decision Making, Customer Satisfaction and Engagement Improvement, Time Management, Problem-solving, Critical Thinking