

Waiz Khan

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EDUCATION

Johns Hopkins University <i>M.S.E. in Data Science</i>	Baltimore, MD Aug. 2024 – May 2026
GD Goenka University <i>B.Tech. in Computer Science & Engineering</i>	Gurugram, India Aug. 2019 – Nov. 2023

EXPERIENCE

Research Assistant <i>Johns Hopkins University, Center for Language and Speech Processing</i> <i>Advisor: Dr. Philipp Koehn</i>	Dec. 2025 – Present Baltimore, MD
Research Assistant <i>GD Goenka University</i> <i>Advisor: Dr. Yogesh Kumar</i>	Aug. 2022 – Nov. 2022 Gurugram, India
Data Scientist Intern <i>EBMS Solutions Pvt Ltd</i>	May 2022 – Sep. 2022 Chennai, India
<ul style="list-style-type: none">Engineered churn prediction pipeline using XGBoost with time-series CV; deployed to production CRM with automated retraining; achieved +15% retention lift and AUC 0.82Built self-serve analytics layer with curated cohort tables and data quality monitoring; reduced reporting cycle time by 30%	

PROJECTS

Black-Scholes Options Pricer <i>Python, NumPy, SciPy, Streamlit</i>	Jan. 2025
<ul style="list-style-type: none">Built production-grade European options pricer with Greeks calculation (Delta, Gamma, Vega, Theta, Rho) and implied volatility solver using Newton-Raphson with Brent fallbackImplemented arbitrage diagnostics (put-call parity, butterfly spreads, strike monotonicity); 91+ tests, 85% coverage	
Monte Carlo Risk Engine <i>Python, pandas, Plotly, Streamlit</i>	Jan. 2025
<ul style="list-style-type: none">Developed portfolio risk simulator computing VaR, CVaR, Sharpe, Sortino, and Max Drawdown using multivariate normal and GBM modelsApplied Ledoit-Wolf covariance shrinkage and walk-forward validation to prevent look-ahead bias; 90%+ test coverage	

TECHNICAL SKILLS

Languages: Python, R, SQL, Rust, Swift, Java, C++, JavaScript, Bash
ML/AI: PyTorch, TensorFlow, scikit-learn, XGBoost; CNNs, transformers, NLP; causal inference (DoWhy); time-series CV
Quant/Finance: Black-Scholes, Greeks, VaR/CVaR/ES; Monte Carlo simulation; portfolio optimization; backtesting
Data/Cloud: pandas, NumPy, SciPy; PostgreSQL, Spark; AWS (EC2, S3, SageMaker); Git, Docker; Tableau, Power BI
Security/iOS: Digital forensics, memory/log analysis, incident response; SwiftUI, Core ML, HealthKit