KRISHNA ARYAL

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• US Permanent Resident • Available Immediately • Open to Relocation

Data Scientist & Computational Analyst with 9+ Published Papers

PROFESSIONAL SUMMARY

PhD-level computational scientist with 9+ published papers and 7+ years of experience in statistical modeling, machine learning, and data analysis. Expert in Python, SQL, and R with proven track record of extracting insights from complex datasets across healthcare, finance, and infrastructure domains. Published researcher with ability to build predictive models, optimize data pipelines, and communicate findings to diverse stakeholders.

CORE TECHNICAL SKILLS

Programming Languages:	Python, R, SQL, MATLAB, Fortran
Python Libraries:	Pandas, NumPy, scikit-learn, Matplotlib, Seaborn, TensorFlow
Machine Learning:	Classification, Regression, Ensemble Methods, Cross-validation
Data Analysis:	EDA, Feature Engineering, Statistical Modeling, Time Series
Visualization & BI:	Power BI, Tableau, Plotly, Advanced Dashboard Design
Database & Tools:	SQL Server, T-SQL, ETL Pipelines, Git/GitHub, Jupyter, Linux

PROFESSIONAL EXPERIENCE

- **Graduate Research Scientist (Data-Intensive Physics Research)** **2019 - 2024**
  Kent State University, Kent, OH
  - Applied advanced statistical modeling and computational methods to analyze simulation data
  - Published 9 peer-reviewed papers in high-impact journals demonstrating research excellence
  - Built scalable data processing pipelines using Python, reducing analysis time by 60%
  - Developed predictive models achieving 95%+ accuracy using machine learning validation
  - Collaborated with international teams, managing projects and presenting at 15+ conferences
  - Created automated workflows for data cleaning, feature engineering, and model validation
  - Mentored graduate students in statistical analysis, ML, and scientific computing methods
- **Research & Teaching Assistant** **2013 - 2015**
  University of Massachusetts Boston, Boston, MA
  - Developed numerical simulations and computational models for complex optical systems
  - Mentored 50+ students in statistical analysis, data visualization, and scientific computing
  - Created educational materials and laboratory exercises for data analysis courses
  - Built automated data collection and analysis systems for experimental research

FEATURED DATA SCIENCE PROJECTS

- **Healthcare ML Pipeline: Cancer Patient Outcomes Analysis** GitHub
  Python, scikit-learn, Pandas, Statistical Modeling
  - Engineered features from multi-year cancer datasets with advanced preprocessing
  - Built classification models achieving 85%+ accuracy using ensemble methods
  - Created automated EDA pipeline with interactive visualizations for medical research

- Applied cross-validation and statistical testing to ensure robust model performance

- **Banking Database & Analytics Platform** GitHub
  SQL Server, T-SQL, Power BI, Database Design
  - Designed normalized database schema for customer accounts and transactions
  - Optimized complex queries with indexing, reducing execution time by 40%
  - Built executive dashboards tracking KPIs, loan performance, and customer metrics
  - Implemented ETL processes for automated data pipeline management

- **Power Grid Disruption Analysis & Predictive Modeling** GitHub
  Python, Time Series Analysis, Geospatial Visualization
  - Analyzed 10+ years of power outage data to identify critical patterns and risk factors
  - Applied time series decomposition and clustering for seasonal trend analysis
  - Created interactive geospatial visualizations and predictive models for planning
  - Delivered actionable insights for improved grid resilience and maintenance scheduling

EDUCATION

- **Master of Science in Analytics** **Expected 2025**
  Georgia Institute of Technology

- **PhD in Computational Physics** **2024**
  Kent State University
  Dissertation: 3 DIMENSIONAL QCD PHASE DIAGRAMS

- **MS in Applied Physics** **2015**
  University of Massachusetts Boston
  Dissertation:Design and simulation of a hybrid dielectric waveguide

PUBLICATIONS & RESEARCH IMPACT

- **9 peer-reviewed publications** with 50+ citations in Physical Review D, Universe, and top-tier journals
- 15+ international conference presentations demonstrating communication skills
- Graduate Research Excellence Award (2023) - Kent State University
- Professional memberships: American Physical Society, IEEE
- **Selected:** "High-energy phase diagrams under heavy-ion collision conditions" (Phys. Rev. D, 2020)

CORE DATA SCIENCE COMPETENCIES

- **Statistical Expertise:** Advanced hypothesis testing, regression analysis, experimental design
- **Machine Learning:** Supervised/unsupervised learning, model selection, validation techniques
- **Data Pipeline Development:** End-to-end workflows from collection to visualization
- **Business Communication:** Translating analytical findings into actionable business insights
- **Problem-Solving:** Systematic approach with emphasis on reproducibility and scalability
- **Domain Adaptation:** Applied skills across healthcare, finance, and infrastructure sectors