Mayukha Mandya Ammangatambu

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EDUCATION:

University of Utah, Salt Lake City, Utah   *Aug 2024 - May 2026*
Master of Science in Computer Scienc**e**, Grade Point – **3.48 / 4.0**
Relevant Coursework: Machine Learning, Image Analysis, Graduate Algorithms, Data Structures
Amazon University Event – ReachBack Registrant   **Sept 2025**

EXPERIENCE:

Bank Data Scientist Intern | BMW Financial Services NA, LLC,   **Present**
- Designed and validated credit-risk models, supporting regulatory/business reporting and compliance for 1,200+ dealers, partnering with Risk and Credit using Python and scikit-learn.
- Improved financial forecasting accuracy by leading a portfolio risk optimization project, identifying 50+ underperforming dealers and optimizing coverage across partner banks.
- Prepared SQL-driven ETL pipelines for credit portfolio data from Amazon SageMaker and Microsoft SQL, reducing data reconciliation time by 40% while ensuring compliance-ready reporting.

Research Assistant | Scientific Computing and Imaging Institute, Utah   **Present**
- Developed deep learning algorithms for automated bone age assessment from pediatric radiographs in collaboration with pediatric surgeons, achieving 1.34 months MAE and 92% gender classification accuracy, surpassing existing benchmarks.
- Deployed Bayesian and regression forecasting models on AWS to optimize resource allocation, reducing computational costs by 15%.
- Engineered C/MPI and Apache Spark pipelines processing millions of medical imaging events daily, improving runtime by 30% and ensuring robust data accuracy and reliability.

IT QA Analyst Intern | Maverik.Inc, Utah   **Jun 2025 - Aug 2025**
- Validated and optimized machine learning algorithms used across 750+ retail stores in the U.S., improving product availability by 39% and enhancing overall customer satisfaction.
- Designed and deployed SQL and PySpark pipelines for forecast validation, reducing product waste by 50%.
- Built a Dockerized CI/CD pipeline, cutting production incidents by 30% and improving model reliability.

Gen AI Research Assistant | Utah Lab of Artificial Powered Systems, Utah   **Oct 2024 - Dec 2024**
- Automated ETL and model monitoring pipelines with PySpark, SQL, and Airflow, reducing data bottlenecks by 35%.
- Operationalized predictive models in Dockerized CI/CD workflows, accelerating model deployment by 20% across teams.
- Introduced Python-based reporting and visualization dashboards, supporting data-driven decisions for 10+ stakeholders.

PROJECTS:

Subscriber Retention & Behaviour Modelling | Python, Spark, SQL, PyTorch, Tableau
- Authored churn prediction models (LightGBM, Bayesian regression) that improved AUC from 0.72 to 0.84.
- Directed SQL + Spark pipelines for 1M+ daily user events and integrated A/B testing results into Tableau dashboards for product teams.

System Reliability Analytics for Medical Imaging| Python, CUDA, PyTorch
- Prepared GPU-accelerated CUDA kernels for MRI image analysis, achieving 3× speedup and cutting processing time by ~10 minutes per scan.
- Proposed a robustness testing framework simulating GPU conditions, validating kernel stability across 1000+ scenarios.

Market Demand Forecasting Dashboard | Python, SQL, PyTorch, Tableau
- Created time-series regression models with 92% prediction accuracy across 1M+ sales records.
- Automated SQL-based ETL pipelines and delivered real-time Tableau dashboards for 25+ product lines.

SKILLS:

- **Risk & Financial Analytics:** Credit Risk Modeling, Regulatory Reporting, Risk Governance, Data Quality & Reconciliation, Financial Forecasting
- **Programming & Data:** SQL (advanced), SAS (working knowledge), Python, R, C++, Java, Bash
- **Statistical & Analytical Methods:** Regression, Bayesian Inference, Forecasting, A/B Testing, Trend Analysis, Root Cause Analysis, Statistical Modeling
- **Data Engineering & ETL:** Data Modeling, Warehousing, ETL/ELT Pipelines, Spark, PySpark, Hadoop (basic)
- **Visualization & Reporting:** Tableau, Power BI (familiar), KPI Dashboards, Flow Charts, Procedure Documentation
- **Cloud & DevOps:** AWS (S3, EC2, Redshift), Docker, Kubernetes, Airflow, GitHub Actions (CI/CD)
- **Collaboration & Leadership:** Cross-functional Teamwork, Project Management, Policy Governance, Stakeholder Communication

PATENTS AND ACHIEVEMENTS:

- Patented a novel neural style transfer method leveraging ResNet for high-fidelity image synthesis (India Patent No. 202341066332, 2023)   Certificate
- Best Paper Award at BVRITHCON 23 – Big Data & Virtual Reality, 2023   Certificate