

# PRAMATH PARASHAR

Tucson, AZ (open to relocate) | USA

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## PROFESSIONAL SUMMARY

Information Management and Data Automation Specialist with experience building document and data management systems in mining and environmental operations. Proven record in implementing governance frameworks, SharePoint-based collaboration platforms, and Power Automate workflows to ensure data integrity, compliance, and traceability across large-scale projects. Skilled in integrating engineering and environmental data systems, enabling digital transformation and cross-functional collaboration across construction, closure, and operations teams.

## TECHNICAL SKILLS

**Programming Languages:** Python, C Programming, C++, Java, JavaScript, R Programming, MATLAB, Simulink.

**Database Management:** MySQL, Oracle SQL, PostgreSQL, SQL Server, NoSQL, Data Warehousing.

**Data Analysis and Visualization:** Excel Dashboard, Alteryx, QlikView, Tableau, Power BI.

**Big Data Technologies:** MapReduce, Hadoop, PySpark.

**Cloud Platforms:** Google Cloud Platform (GCP), Amazon Web Services (AWS), Microsoft Azure, IBM Watson.

**AI & Conversation Design:** Prompt Engineering, Chain-of-Thought Design, Few-shot Learning, LLM Evaluation Metrics (Clarity, Coherence, Factuality), Retrieval-Augmented Generation (RAG), LangChain, Streamlit Chat, n8n Orchestrator, OpenAI API, ChromaDB, FastAPI.

**Software Development:** Spring Framework, JDBC, Test-Driven Development (TDD), Agile Methodologies, CI/CD.

**Data Governance & Architecture:** UI/UX, Data Quality, Data Processing, Security Controls, Root Cause Analysis, Data Modeling, Data Transformation, Data Mapping, Data Collection, Data Architecture.

**Other Skills:** TCP/IP, Jenkins, SAP, Share Point, Teams, Power Automate, ADAS, Microsoft Excel, Power Apps, Canvas Apps.

**Crucial Conversations Training:** Completed professional development course focused on mastering high-stakes communication, conflict resolution, and effective dialogue in workplace settings.

**Databricks Platform:** Spark, Delta Lake, MLflow, Lakehouse Architecture, DataBricks SQL.

## WORK EXPERIENCE

### Data Science Specialist

Sep 2024 – Present

**BHP Minerals Service Company - Legacy Assets (Client via AirSwift), Tucson, AZ, USA**

- Engineered automated data and reporting pipelines using **Python, SQL, and Power BI**, transforming complex environmental datasets into clear, actionable insights.
- Designed and optimized data infrastructure for large-scale analytics workloads using Databricks and PySpark, improving pipeline reliability and compute efficiency.
- Developed and deployed production-ready machine learning models leveraging Databricks Lakehouse, MLflow tracking, and Delta Lake storage layers to ensure reproducibility and scalability.
- Designed and deployed an **Excel–SharePoint sync system** via **Power Automate + Graph API**, streamlining 4,000+ daily file transfers and metadata updates.
- Created **AI-driven communication workflows** that convert technical data into concise natural-language reports, improving cross-team clarity.
- Built **prompt-testing and LLM evaluation scripts** in Python to assess response quality (accuracy, tone, clarity) and refine AI-generated outputs.
- Developed predictive models (regression, clustering, XGBoost) to identify environmental risk drivers and enhance closure cost forecasting.
- Collaborated cross-functionally with data engineers, platform teams, and stakeholders to align ML infrastructure performance with key business OKRs on reliability and efficiency.
- Automated generation of regulatory deliverables, reducing manual effort by **80%** and saving **\$50K+ annually**.

### University Student Web Developer Part time

Feb 2024 - May 2024

**Kent State University, Kent, OH, USA** [Verify](#)

- Orchestrated a strategic website enhancement plan for the Africana Studies department, which enhanced user retention by 30% and led to a 15% increase in student inquiries, driven by the implementation of SMS alerts.
- Implemented targeted social media ad campaigns that yielded a 50% increase in event attendance; collaborated with design team to create compelling visual content that engaged 10,000+ online followers.

### Data Analyst Unpaid Internship

Feb 2024 - Apr 2024

**Datics INC, Charlotte, NC, USA**

- Conducted in-depth data analysis to uncover patterns and trends, resulting in a data-driven decision-making approach that boosted sales by 22% and optimized marketing strategies.
- Developed SQL procedures and customized queries to import data from SQL Server into visualization tools, resulting in a 5% increase in data-driven insights for decision-making purposes.
- Engineered a data pipeline using SQL, NumPy, and Pandas, improving data quality and speeding up Tableau reporting by 10%. Worked with analysts to boost forecasting and operational efficiency.

### Technical Support Associate

Nov 2021 - Apr 2022

**Pioneer Instruments, Hyderabad, Telangana, INDIA** [Verify](#)

- Orchestrated project planning and execution for 10+ initiatives, ensuring strict adherence to timelines and deliverables, resulting in an increase in on-time project completion rates across the portfolio by a 16%.
- Monitored project budgets, tracked expenses, and prepared financial reports to ensure cost-effectiveness and compliance with financial guidelines.
- Administered project schedules and milestones to streamline project execution, leading to a 25% decrease in project timeline overruns and enhancing project delivery efficiency.
- Collaborated with cross-functional teams to address project-related issues and ensure project success.

### Machine Learning with python Student Intern

Mar 2021 - Apr 2021

**Verzeo, Bengaluru, Karnataka, INDIA** [Verify](#)

- Revamped project management processes by implementing Agile methodologies, resulting in a 40% increase in project efficiency and on-time delivery; elevated programming skills through hands-on experience in Python machine learning techniques.
- Drafted project implementation strategies and testing plans to ensure superior functionality and reliability; conducted in-depth user acceptance testing resulting in a 30% reduction in post-launch defects and a 20% increase in overall system performance.
- Prepared and presented a comprehensive report showcasing project achievements, while tracking weekly progress to ensure timely milestone delivery.

### Web Application Development Student Intern

May 2019 - Jun 2019

**VVV Infotech, Hyderabad, Telangana, INDIA** [Verify](#)

- Developed a web application for a student dashboard at Malla Reddy Engineering College with visualizations to provide faculty members with insights into students' test performances.
- Led the implementation of a roll number registration feature enabling students to monitor attendance and academic performance; increased student involvement by 35% and academic success rates by 20%.
- Collaborated with a team to ensure successful implementation and functionality of the web application.

## PROJECTS

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### Agentic Water Intelligence Assistant [GitHub](#)

Nov 2025

Built a multi-agent AI system using Python and Streamlit that autonomously retrieves and analyzes environmental PDFs, demonstrating Agentic AI reasoning and task orchestration for data-driven decision support.

### Annual Reporting Automation Suite (Python + EQuIS + Snowflake)

Sep 2025

Developed a PyQt-based desktop application that automates the generation of BHP's environmental annual report visuals. By selecting a site and reporting year, the tool dynamically produces all required visuals, tables, and metrics using data sourced from Snowflake and EQuIS. The system integrates multiple Python automation scripts to streamline content creation, reducing manual compilation time by over 80% and saving approximately \$50,000 annually in external consultant costs.

Extended automation pipelines to Databricks for distributed model training and real-time analytics, integrating with MLflow for experiment tracking and model versioning.

### Water Quality Monitoring Dashboard (Power BI)

Jun 2025

Developed an enterprise-level Power BI dashboard covering all BHP U.S. and Canadian sites to visualize chemical concentration trends (e.g., Al, Sb, As) using data from EQuIS, Snowflake, and SharePoint. Integrated direct links to As-Built drawings and site-specific well documentation, allowing engineers and environmental teams to access monitoring history, exceedance data, and compliance reports through a single interactive interface. The tool supports regulatory reporting, closure key risk indicators and long-term environmental monitoring.

### Enterprise Information Governance Automation (SharePoint + Power Automate)

Mar 2025

Designed and implemented an end-to-end information management system integrating Excel metadata, PDF records, and SharePoint document libraries. Automated data validation, file versioning, and compliance-driven retention policies for over 4,000 records daily. Improved document traceability, collaboration, and audit-readiness across environmental project teams.

### CTD Processor App (PyQt)

Oct 2024

Created a Python PyQt desktop application for transforming, calibrating, and validating CTD (Conductivity-Temperature-Depth) Excel profiles. Enabled dynamic parameter input, quality control automation, and consistent data output for field teams.

### Water Potability Prediction App [GitHub](#)

Jun 2025

This project predicts whether water is potable (safe for drinking) based on various physicochemical properties. It includes a machine learning pipeline built using XGBoost, calibrated for better probability estimates, and a modern Streamlit web app for user interaction.

### Analysis of Car Sales Data in Tableau [GitHub](#)

Jan 2024

Incorporated Tableau to analyze car sales data, identify key trends and popular models, resulting in strategic decisions that increased revenue by 12% and improved competitiveness through optimized sales strategies.

### Analysis of Netflix Dataset [GitHub](#)

Oct 2023

Analyzed of Netflix content, revealing trends that boosted user engagement. This, coupled with leading a team to improve user experience, resulted in a 30% decrease in customer churn and a 40% increase in satisfaction.

### Data Analysis of Walmart Sales [GitHub](#)

Aug 2023

Leveraged data techniques on Kaggle's Walmart dataset, pinpointed top branches and products, handled NULL values, and introduced new features, resulting in a 15% sales boost and project success.

## EDUCATION

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### Kent State University, OH, USA

Master of Science — Data Science.

### Malla Reddy Engineering College, Telangana, INDIA

Bachelor of Technology — Computer Science and Engineering.

## LICENSES AND CERTIFICATIONS

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PL-600: Microsoft Power Platform Solution Expert [Verify](#)

AZ-900: Microsoft Azure Fundamentals [Verify](#)

PL-200: Microsoft Power Platform Consultant [Verify](#)

MTA: Introduction to Python Programming [Verify](#)

PL-300: Microsoft Power BI Data Analyst [Verify](#)

Google Data Analytics Professional Certificate [Verify](#)

PL-900: Microsoft Power Platform Fundamentals [Verify](#)

Cisco: Introduction to Packet Tracer [Verify](#)

DP-900: Microsoft Azure Data Fundamentals [Verify](#)

Cisco: Introduction to Cybersecurity [Verify](#)

## PUBLICATIONS

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- Water Risk Compliance: A Retrieval-Augmented, Explainable, and Interactive System for Drinking Water Compliance Analytics [Paper](#) [DOI](#) [Link](#)

Sep 2025

- Self-Evolving AI Workflows: A Formalized Feedback Model for Autonomous Optimization [Paper](#) [DOI](#) [Link](#)

Sep 2025

- Enhancing Association Rule Mining with the CGRG Algorithm: A Cluster-Based Approach [Paper](#) [DOI](#) [Link](#)

Sep 2025

- Enhanced Visual Statistical Inference: Comparative Evaluation with Linear Model Testing [Paper](#) [DOI](#) [Link](#)

Aug 2025

- Comparative Analysis of Distributed Storage Systems: Architectural Design, Performance, and Cost Trade-offs in Modern Cloud Environments [Paper](#) [DOI](#) [Link](#)

Jul 2025

- Hybrid Cloud Analytics for Environmental Data: Integrating EQuIS, SQL Server, Python, and Snowflake for Scalable Compliance Monitoring [Paper](#) [DOI](#) [Link](#)

Jul 2025

- Optimizing Market Making with MDPs [Paper](#) [DOI](#) [Link](#)

Jul 2025

- Design and Implementation of an Automatic Plant Watering Device with 2D Visual Gesture Recognition [Paper](#) [DOI](#) [Link](#)

Jul 2025

- Water Potability Prediction App: A Cost-Free, Streamlit-Based Machine Learning System Using Public Environmental Data [Paper](#) [DOI](#) [Link](#)

Jun 2025

- Value-Based Resource Allocation for Edge Computing: A Market Balancing Approach [Paper](#) [Link](#)

Mar 2021 – Apr 2021