Shashwat Singh

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EDUCATION

M.S in Data Science-University of Arizona, Tucson, AZ

August 2023 - May 2025

Coursework: Data Mining, Machine Learning, Data Visualization, Data Warehousing in Cloud, Intro to AI, Healthcare Data Science, Natural Language Processing **GPA: 3.78/4.0**

B.E in Computer Science & Engineering - RGPV, India

July 2015 - May 2019

Coursework: Data Structure & Algorithms, Software Engineering; GPA: 3.22/4.0

PROFESSIONAL EXPERIENCE

UNIVERSITY OF ARIZONA | Tucson, Arizona, US

Sep 2023 - Jan 2025

Process Automation Specialist (Data Analyst)

- **Enhanced organizational efficiency** by automating complex workflows using PowerApps and Power Automate, achieving a **40%** reduction in manual processing time and improving data accessibility
- Developed and maintained over 25 dynamic dashboards in Power BI, delivering real-time actionable insights and enabling a 30% improvement in data-driven decision-making across multiple departments
- Performed statistical analyses on datasets with 5000 rows, uncovering actionable insights that helped leadership achieve 20% gains in operational efficiency through strategic planning
- **Automated over 20 data pipelines,** seamlessly integrating data from diverse sources with 95% accuracy, reducing reporting lag by **50%** and enhancing analytics reliability

INFOSYS LTD. | India

Oct 2021 - June 2023

Senior Systems Engineer (SDE 2)

- Achieved 400% workload turnaround efficiency by leading a team of 4 software engineers and completing 4 high complexity tasks in 3 months exceeding the original timeline by a factor of 4.
- Led the development of 30+ Robotics Process Automation (RPA) use-cases for Logistics and HR, improving workflow efficiency, driving results that generated a \$2.5 million profit for the client
- Designed pricing algorithms using parameters like weight, distance, urgency, and hazmat status, enabling dynamic adjustments. Improved processing speed by 30% and reduced manual effort by 50%
- Implemented and architected reusable Python frameworks for data scraping, mining, and processing, standardizing workflows, saving 72 human hours per week, and cutting processing times by 40%
- **Developed advanced data visualization dashboards** with BI teams, integrating insights from multiple data sources to provide leadership with **real-time analytics** supporting **3 critical business units**
- Optimized ETL pipelines to transform datasets exceeding 1 million rows, implementing robust validation techniques, reducing data latency by 30%, and enabling faster, accurate reporting for diverse functional teams

INFOSYS LTD. | India

Sep 2019 - Sep 2021

Systems Engineer (SDE)

- Drove Robotic Process Automation (RPA) development and data cleaning activities for 3 major clients, delivering
 15+ RPA projects and achieving a 60% reduction in manual processing time
- Collaborated with Business Analysts to gather and integrate data from diverse sources, enabling a **50% increase** in data mining efficiency and significantly improving reporting capabilities
- Developed optimized SQL queries and reusable stored procedures, improving efficiency and consistency.
 Leveraged stored procedures to handle datasets exceeding 200,000 rows, ensuring scalability and accuracy

SKILLS

- Core: Data Integration, Statistical Analysis, Data Visualization, Automation, Machine Learning, Data Modeling
- Languages: Python, R, SQL, C#, Javascript, HTML, CSS
- **Databases:** MySQL, PostgreSQL, MS SQL, MongoDB, Snowflake
- Tools & Platforms: Power BI, Tableau, AWS, Azure Data Factory
- **Technical:** Jupyter Notebooks, Docker, Git, TensorFlow, PyTorch, scikit-learn, Keras, Flask, FastAPI
- **Soft Skills**: Cross-functional Collaboration, Project Management, Problem Solving, Agile Methodologies

ACADEMIC PROJECTS

Fetal Health Prediction | Tucson, AZ

August 2024 - December 2024

- Developed advanced machine learning models to accurately predict fetal health outcomes using CTG data, achieving
 98-99% accuracy with SMOTE and RandomizedSearchCV to handle class imbalance effectively
- Implemented and optimized ensemble models (Random Forest, Gradient Boosting, XGBoost), **improving recall for minority classes by over 30% and precision by 20%**, leveraging key indicators like Prolonged Decelerations
- Leveraged Al-driven solutions for scalable, non-invasive diagnostics, effectively addressing critical healthcare disparities for over 5,000 CTG records in alignment with UN Sustainable Development Goals (SDG 3)

Portfolio+ | University of Arizona

August 2024 - December 2024

- **Developed a MySQL-backed virtual stock portfolio management system**, integrating real-time data using yfinance API, allowing **50+ users to track 100+ stocks**, simulate trades, analyzing portfolio performance dynamically
- Designed an interactive Flask-based UI with modular dashboards, personalized summaries, market visualizations, and seamless transitions for buy/sell actions, improving user engagement by 40% compared to baseline prototypes
- Designed an **optimized MySQL database schema** handling over **10,000 rows of stock and user data**. Deployed the application on a **cloud platform with zero downtime**, ensuring scalability for up to **1,000 concurrent users**

FocusRide: AI-Powered Road Safety and Travel Optimization | University of Arizona August 2024 - December 2024

- Developed an Al-driven driver monitoring system, integrating deep learning models like **ResNet50 and MobileNetV2** to detect distracted driving with high accuracy in real time
- **Designed dynamic route optimization algorithms**, incorporating distraction levels, traffic data, and road conditions, improving driver safety by 30% while maintaining travel efficiency

Predicting Asset Prices by 2026 | University of Arizona

August 2024 - December 2024

- **Developed predictive models** using linear regression to forecast prices of stocks, cryptocurrencies, and commodities, achieving a model accuracy of **76.5% variance explained** for Apple's stock trends.
- **Performed data wrangling and exploratory analysis**, standardizing inconsistent date formats, analyzing trading volumes, and visualizing price trends for assets spanning 2020–2024