Ayush Kaurav

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EXPERIENCE

W.P. Carey School Of Business Nov. 2024 – Present
Explainable AI Researcher AZ, USA

Breast Cancer Diagnosis using Explainable AI

- Designed an advanced Explainable AI (XAI) system for early breast cancer detection in collaboration with HonorHealth.
- Leveraged CVAT for annotating breast tissue masses and distorted boundaries to classify as benign or malignant.
- Integrated YOLO object detection models with Ultralytics for image segmentation, achieving a high-performance accuracy of 96 through rigorous training and testing on annotated datasets while optimizing model architecture.

WP Carey Career Services Nov. 2024 – Present
International Initiatives Career Support AZ, USA

Alumni Appointments Data Analytics

- Conducted data analysis and cleansing using Microsoft Excel and Python's Pandas which increase data accuracy by 30%.
- Designed an interactive Tableau Dashboard to visualize month-over-month appointment trends for FY24, resulting in increase of appointments by 37% in Jan 2025.

SM and Undergraduate Student Demographic Analysis Project

- Conducted demographic analysis of international students in specialized master's and undergraduate programs using Pandas and NumPy for data manipulation and cleaning.
- Aimed to create a comprehensive view of enrollment patterns, diversity, and trends across demographics and programs.
- Designed interactive Tableau dashboards that identified key trends and insights across demographic locations and program enrollments, aiding academic and policy decision-makings.

Infosys Pvt. Ltd. Aug. 2022 – Aug. 2024
System's Engineer India

Software Development for Taxation System in India

- Delivered Reliable and High-Quality Taxation Solutions for Government of India, enhancing portal reliability and streamlining tax filing processes.
- Developed and implemented automation solutions using Postman, Rest Assured, Jenkins (CI/CD), and Cucumber, improving development efficiency and functionality.
- Automated 100+ test scenarios, reducing regression testing time by 87.5%, ensuring API reliability, and maintaining data security and compliance.

PROJECTS

Customer Behavior Analytics Database [demo] [code] Jan. 2025

- Led the development of a retail database, normalized to Boyce-Codd Normal Form (BCNF), to address the challenges of analyzing dynamic customer shopping behaviour for over 5,000 customers. Optimized query performance by 30%, providing stakeholders with critical insights into customer behaviour and sales trends, enabling more effective data-driven decisions.

Sberbank Russian Housing Market [code] Nov. 2024

- Built predictive models (e.g., Random Forest, Decision Tree, MLPRegressor) to analyze housing prices, achieving a Kaggle score of 0.3291 which is RSME lesser the score model fits better.
- Conducted feature engineering, hyperparameter tuning, and ensemble modeling for optimal performance.
- Used Python (Pandas, Scikit-learn) and statistical methods to extract insights from complex datasets.

Assessing-ARPA-Fund-Allocation-and-Spending-Efficiency[demo] [code] Oct. 2024

- Perform Advanced Analytics and analyzed $396M in ARPA funds across 50 programs using Python, identifying spending patterns through data cleansing, visualizations, and a Pearson correlation (0.92) between allocated and spent funds.
- Calculated efficiency ratios, resulting in 20% of programs completely utilized allocated budgets, while others underutilized by up to 30%, identifying $122.6M (31%) in unspent funds.
- Analyzed unspent allocated funds, created visualizations, and presented insights in a poster format to recommend more efficient fund allocation.

EDUCATION

Arizona State University, Tempe Aug. 2024 – Dec. 2025
Master of Science in Business Analytics, Fin-tech | GPA 3.67 AZ, USA
Coursework : Enterprise Data Analytics, Descriptive & Predictive Analytics, Machine Learning in Business, Analytical Decision Modeling, Quantitative Risk Management, Business Process Analytics

SKILLS

Programming Languages : Python, R, SQL (MySQL), SAS, HTML, CSS, Java, XML
Tools : Microsoft (Power BI, Office), Tableau, AWS, MongoDB, Postman, JIRA
Data Science & Analytics : Python (Pandas, NumPy, Matplotlib, SciPy, Scikit-learn, Ultralytics, Computer Vision, Yolo), ETL, Data Science Pipeline (cleansing, wrangling, visualization, modeling, interpretation), Statistics, Mathematics, Ad-Hoc Analysis, Power Query, Tensorflow, PyTorch
AI : LLM (Open AI, Llama, Gemini, Claude), Prompt Engineering, Re-Ranking
Machine Learning : Regression, Classification, Clustering, Kaplan Meier Curve, Time Series Analysis