Mohammad Zarak Shah Ji
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WORK EXPERIENCE

BMW Financial Services   **Woodcliff Lake, NJ**

Senior Data Analyst | Finance Department   *September 2024 - Present*

- Spearheaded the migration of over 750 financial reports from Crystal to Tableau, resulting in a quarterly savings of $300,000
- Optimized the monthly financial reconciliation process by implementing advanced SQL queries and automated data validation checks, reducing discrepancies by 25% and saving over 50 hours of manual review per month
- Led a cross-functional team to integrate new financial software, enhancing data accuracy and reporting capabilities, which resulted in a 15% increase in the speed of financial closing processes and improved decision-making for senior management
- Developed Python scripts to automate the generation of tax letters, leading to a significant reduction in manual effort and improved efficiency by dynamically fetching vehicle data, populating templates, and incorporating user inputs

Data Analyst | Used Vehicle Business Department   *September 2023 –August 2024*

- Built a recommendation model using clickstream data, improving targeted promotions 20% reflected in higher conversion rates
- Created Tableau dashboards for pre-owned vehicles retail team, reducing reporting time by 40% through automation of data collection and visualization, as measured by comparing pre and post implementation reporting times
- Automated the cash reporting process for VP decision making, migrating large portions from Excel to SQL and reducing the overall financial month-end close turnaround time from 3+ days to 1 day

BMW of North America   **Oxnard, CA**

Software Engineer | Vehicle Emissions Testing Team   *September 2022 – September 2023*

- Engineered a vehicle test order management app using TypeScript, Angular, Express, and Node, achieving a 97% validity rate
- Architected RESTful APIs, reducing server response time by 30% through optimized query handling and efficient load balancing
- Led the design of scalable system architecture for vehicle test order manager, reducing database load and faster data access

Sandia Labs   **Livermore, CA**

Research Scientist | Cyber Security Research and Development Team   *September 2021 – August 2022*

- Conducted microservices penetration testing with Python and TensorFlow, forecasting threats and conducting fraud prevention
- Created datasets from attack telemetry, trained Recurrent Neural Networks model, yielding a 90% accuracy in threat detection
- Remodeled a load testing tool to conduct DDoS attacks, identifying 7+ vulnerabilities in microservices
- Deployed an open source microservices application on Kubernetes using YAML config files, achieving 100% functionality

University of Kashmir   **J&K, India**

Full-Stack Developer | Web Development Team   *March 2020 – August 2021*

- Developed and maintained an e-commerce web app using Django, resulting in significant increase in sales within first 6 months
- Utilized Python async programming to process real-time user interaction data, improving ad relevance and user engagement
- Refactored legacy systems using design patterns and Git, boosting maintainability and reducing technical debt

EDUCATION

California State University Northridge, **College of Engineering and Computer Science**   **Los Angeles, CA**

Master of Science in Computer Science and Data science | Outstanding Student Award | Valedictorian | GPA: 4.00 / 4.00

University of Kashmir, Department of Computer Science and Engineering   **Kashmir, India**

Bachelor of Technology in Computer Science and Computer Engineering

PUBLICATIONS AND PROJECTS

Predictive Modeling of Diabetes Onset and Survival Analysis Among Diabetic Patients   (CSCE), 635 -641 page, [DOI](#)

- Built random survival forest model using heart failure data, identified anemia high BP as risk factors for cardiac event (0.90 AUC)

Driver Drowsiness detection   [GitHub](#)

- Experimented a 95% accurate drowsiness detection system through facial analysis using OpenCV, YOLO v5, NumPy, Matplotlib

HONORS, LEADERSHIP & ACHIEVEMENTS

- Teaching Faculty Leader | El-Zahra Education Center | 2024   SQL Certified Professional| TestDome | 2023
- Tableau Desktop III Advanced Certification | Salesforce | 2023   Master's Batch Excellence Award (Rank 1) | 2023
- Research Bootcamp Mentor | IEEE-Eta Kappa Nu | 2022   Machine learning with Python from IBM | Coursera | 2020

SKILLS

- **Programming Languages**: Python, R, JavaScript, C, C++, Java **Frameworks/Libraries:** PyTorch, Keras, Angular, Scikit-learn, Pandas
- **Data Science:** Statistical analysis & modeling, Inferential & casual methods   **Analysis**: Data mining, Data insights, Data modeling
- **Databases & Cloud:** MySQL, PostgreSQL, Amazon S3, Git, Docker, Kubernetes   **Visualization:** Tableau Desktop, Tableau Prep