

Taha Shafaqat | U.S. Citizen
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Education:

DOUBLE MAJOR | BACHELORS IN COMPUTER SCIENCE AND SOFTWARE ENGINEERING | BACHELORS IN ECONOMICS | GPA 3.77 @
UNIVERSITY OF WASHINGTON – Expected in June 2027

Work Experience:

Digitalization Project Lead & Data Engineer, The House of Wisdom

Lynnwood, Washington June 2025-October 2025.

- Led the development of a full-stack web application to automate internal operations like scheduling and communication for over 100 users. Engineered and designed ETL pipelines to track attendance for 300+ students and log hours for 50+ employees.
- Utilized Python, Firebase and Google Data Studio to build dynamic dashboards for real-time performance monitoring and integrated a secure online tutoring system into the platform. Automated routine tasks and performed debugging using AI-powered solutions (e.g., Google Gemini).
- Enabled data-driven decisions for leadership, leading to a 40% expansion of the organization's reach to serve students in previously inaccessible areas like Tacoma and the South Sound, increased administrative and project manager efficiency by over 50%

Autonomous Software Engineer, Trickfire Robotics (Student Organization)

Bothell, Washington October 2025-Current.

- Developed autonomous navigation algorithms using Python, computer vision, and LiDAR data to enable real-time obstacle detection and path planning for a competition mars rover.
- Used OpenCV and ROS frameworks to process camera and LiDAR sensor input, improving object accuracy and route optimization for fully autonomous movement.
- Leveraged AI-powered solutions (e.g., Google Gemini) to automate routine tasks such as debugging, code generation, and sensor data annotation, enhancing productivity by 30%

Skills

- **Technical Skills:** SQL, Python (Pandas, NumPy, Matplotlib, Seaborn, Scikit-Learn), PowerBI, Gemini Code Assist
 - **Soft Skills:** Storytelling, Business Decision Making, Leadership
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Projects:

- **Minimum Wage Project:**
 - Analyzed the disparity between the U.S. minimum wage and the cost of living by modeling how wage trends would appear if indexed to inflation by using P-SQL and BLS inflation and minimum wage data.
 - Developed Power BI dashboards visualizing long-term affordability changes for housing and other major expenses, offering clear insights into economic trends.
- **Portfolio Optimization & Risk Analysis Project:**
 - Optimized a stock portfolio by analyzing a decade of historical price data from Yahoo Finance to determine optimal risk-return allocations.
 - Used Pandas and NumPy for data preprocessing and statistical analysis. Created a covariance matrix from the combinations of stocks based off 10 years of pricing data. Ran 50000 Monte Carlo simulations on the stocks to simulate various portfolios.
 - Generated Seaborn visualizations of the efficient frontier and portfolio distribution to present optimal allocations and highlight the benefits of diversification. Found and visualized portfolios with the lowest volatility, highest return, and highest Sharpe Ratio.
- **EV Charging Optimization & Forecasting (400,000+ rows):**
 - Used EV charging station data and OpenStreetMap geometric data and machine learning to identify charging deserts and determine optimal spots for EV charger expansion.
 - Processed and cleaned public datasets from sources including the U.S. DOE and OpenStreetMap with Python (Pandas, NumPy), Gemini, and PostgreSQL (PostGIS), then applied XGBoost and Prophet models to predict demand.
 - Created Dash visualizations mapping high-demand regions and recommending station locations to support strategic network expansion.

