# Muhammad Wassay Shahid

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## Technical Skills

**Languages**: Java, Python, C/C++, SQL, HTML/CSS, JavaScript, Haskell, Elm, Shell
**Frameworks/Tools**: Flask, Git, Visual Studio, PyCharm, IntelliJ, Eclipse, DBeaver, JUnit, REST API, AWS, Microsoft Power Platform (Power Apps, Power Pages, Power Automate, Power BI), Microsoft 365, Azure
**Libraries**: PyTorch, TensorFlow, pandas, NumPy, Matplotlib, pygame, OpenCV, DeepFace, spotipy

## Experience

**Service Management Support Co-op** Sept 2025 – Present
*Government of Ontario* *St. Catharines, ON*

- Built and maintained portals with Power Apps and Power Pages to improve stakeholder accessibility and information delivery.
- Automated workflows using Power Automate, reducing manual service request processing by 30%.
- Designed low-code/no-code solutions aligned with government digital standards and integrated with Microsoft 365 and Azure.
- Enhanced user experience by designing responsive, accessible interfaces aligned with government digital service standards.

**AI/ML Intern** May 2025 – July 2025
*ArhamSoft (Pvt) Ltd.* *Lahore, Pakistan*

- Joined the AI/ML team and received mentorship on designing, training, and evaluating deep learning models.
- Developed a Convolutional Neural Network (CNN) from scratch using PyTorch and trained it on the CIFAR-10 dataset.
- Achieved an accuracy of approximately 92% on the test set through hyperparameter tuning and data augmentation.
- Deployed the trained model using Streamlit, enabling interactive real-time image classification via a web interface.
- Documented model architecture, training methodology, and deployment steps to support reproducibility and scalability.

## Projects

**Portfolio Website Development**

- Implemented a responsive portfolio website using HTML, CSS, and JavaScript.
- Optimized CSS media queries for seamless adaptation to various screen sizes, including mobile (up to 375px width) and desktop (above 1024px).
- Designed a mobile-friendly hamburger menu with an interactive toggle function in JavaScript.
- Incorporated CSS transitions and animations to enhance user experience with smooth hover effects and animations for buttons, links, and icons.
- Deployed the website using GitHub Pages, maintaining a 99.99% uptime across multiple devices and browsers.

**Snake Game Development**

- Developed a classic Snake Game using Python and Pygame.
- Implemented game logic, including snake movement, fruit consumption, and collision detection.
- Designed a user interface (UI) with distinct colors for the snake, fruit, and background for better visual clarity.
- Managed real-time score display and created a game-over screen with reset functionality.
- Handled user inputs via keyboard to control the snake's movement and adjust gameplay speed.

**Emotion-Based Music Recommendation System**

- Developed a real-time emotion detection system using Python, OpenCV, and the DeepFace library, achieving an emotion detection accuracy of over 90% under ideal lighting conditions.
- Integrated the Spotify Web API to retrieve audio features for songs and classified them into emotional categories with a precision rate of 85% using metrics like valence, energy, and danceability.
- Implemented logic to map detected emotions (e.g., happy, sad, angry, neutral, fear, surprised, and disgust) to curated playlists, reducing recommendation redundancy by 60% with randomized track suggestions.

## Education

**McMaster University** Aug. 2022– Present
*Bachelor of Computer Science* *Hamilton, ON*