

# Yuvraj Singh Birdi

+1 (519) 288-5576 | [Email](#) | [Linkedin](#) | [Github](#) | [Gitlab](#)

## TECHNICAL SKILLS

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**Languages:** Python, C++, Java, HTML/CSS, MySQL, Bash and Fish

**Developer Tools:** Github, Gitlab, The IntelliJ Suite, VS Code, Emacs, Neovim, Alacritty, Docker, MySQL etc

## PROJECTS

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- Fitris** | *React.JS, Mediapipe, OpenCV, Flask, WebSockets, Git* June 2024
- Developed an innovative game that helps transform exercise routines by integrating them with the Tetris
  - Developed a Flask-based backend to facilitate real-time communication between the React.js frontend and the OpenCV model using WebSockets, achieving **0% packet loss**
  - Addressed the challenge of boredom in exercise routines by creating an engaging solution for users by keeping them entertained while their achieving fitness goals
  - 3rd Place Winner of Jamhacks 8 [DoraHacks](#)
- Arch Linux Installer** | *Shell, Git* September 2023
- Built a custom installation script to automate the setup of Arch Linux with personalized configurations
  - Automated the process from drive partitioning to GUI environment setup and dotfiles installation, completing the entire configuration in under **5 minutes**
  - Simplified the re installation process, **saving hours** during system setups for new machines [Github](#)
- The Animal Monitoring Association** | *Django, pytorch, matplotlib, numpy, pandas, Git* June 2023
- Created AMA an AI-powered web app utilizing audio classification to identify and warn travelers about dangerous animals in wildlife areas.
  - Used PyTorch to pre-process and augment over **1000 audio files**, extracting spectrogram features for input into a multi-layered CNN and linear classifier model, resulting in highly accurate animal sound detection.
  - Overcame challenges in processing multilingual and unorganized audio data, achieving impressive accuracy through state-of-the-art audio processing and augmentation techniques.
  - Submitted to WaffleHacks 2023 [Devpost](#)
- JamPJaxs** | *Python (Mediapipe, OpenCV), Godot, Git* June 2023
- Created "JamPJaxs" video game, Which merges Cookie Clicker's progression with exercise tracking using webcam and Google's Media Pipeline.
  - Developed Python ML backend for exercise detection and integrated it with Godot Engine 4.0 UI using UDP packets.
  - Implemented landmark analysis to accurately identify jumping jacks, squats, and high knees for in-game rewards.
  - Submitted to Jamhacks 7 [Devpost](#)

## WORK EXPERIENCE

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- Gurdwara Langar Hall Seva** May 2023 – Present  
*Guru Nanak Mission Centre* 13 Guru Nanak St, Brampton
- \* Assisted in the preparation and distribution of langar (free community meals) to visitors and devotees of the Gurudwara.
  - \* Collaborated with a diverse team of volunteers to maintain a smooth and efficient operation during langar service hours.
- World Financial Group (WFG) Training Volunteer** June 2023 – Present  
*Wold Financial Group* Branch: 100 Milverton Drive, Mississauga
- \* Assisted in organizing and facilitating training sessions for associates and trainees of World Financial Group (WFG).
  - \* Attended and conducted workshops and group activities to enhance participants' understanding of financial products, services, and industry regulations.

## EDUCATION

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- University of Waterloo** Waterloo, Ontario  
*Bachelor of Applied Science - BAsC, Computer Engineering* September 2024 – 2029
- Louis Arbour SS** Brampton, Ontario  
*Ontario Secondary School Diploma (OSSD)* February 2023 – June 2024