

Zayn J Abbas

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Skills

Languages: Python, Java, C++, JavaScript
Web Frameworks: React, Angular, Django
Databases: SQL, NoSQL
Tools: Git, Agile Methodologies

Education

University of Guelph May 2023 – Present
Msc. of Computer Science — Specialization in Human-Computer Interaction and Artificial Intelligence
Expected graduation: August 2025

- **Relevant Coursework:** Advanced Algorithms, Machine Learning, Distributed Systems, Data Mining, Human-Computer Interaction, XAI

University of Guelph Jan 2018 – May 2023
Honours BS. of Computer Science — Specialization in Software Engineering
Graduated with Distinction

- **Relevant Coursework:** Data Structures and Algorithms, Software Engineering, Database Systems, Artificial Intelligence, Web Development

Work Experience

Software Developer Mississauga, ON
Nature Analytics July 2024 – Present

- Spearheaded the development of an innovative web-based Nature Analytics Toolkit, leveraging my expertise in R, Shiny, and Blockly
- Demonstrated strong leadership skills by successfully conducting the entire software development lifecycle, from requirements gathering to deployment
- Showcased my creative problem-solving abilities by designing and implementing an intuitive and user-friendly dashboard interface using shinydashboard
- Seamlessly integrated the Blockly visual programming library, enabling users to create custom analytics equations effortlessly using drag-and-drop blocks

Software Mobile Developer Guelph, ON
StreetsOf Official Sept 2024 – Present

- Designed a user-friendly mobile interface allowing players to easily browse through different game modes, customize their decks, and manage their profile
- Implemented secure user authentication using Firebase Authentication, ensuring that players' accounts and progress are protected and can be accessed seamlessly across devices
- Conducted user testing and gathered feedback to iteratively refine and enhance the UX/UI, incorporating user insights to deliver a user-centric and intuitive mobile app experience
- Optimized the app's performance and responsiveness, ensuring smooth transitions between screens and minimizing load times, resulting in a fluid and efficient user interface

Contract Software Developer Guelph, ON
Nature Analytics Sept 2024 - Oct 2024

- Developed a robust and automated backup solution for the client's DigitalOcean Spaces and Buckets, ensuring reliable and regular data protection

- Implemented a script that seamlessly backs up all DigitalOcean Spaces and Buckets on a monthly basis, providing peace of mind and minimizing the risk of data loss
- Implemented a secure and automated backup process by leveraging cron jobs to schedule and execute the backup script at regular intervals

Contract Web Developer

Spruit Veterinary Clinic

Guelph, ON

Dec 2024 – Jan 2025

- Led the full-cycle web development process, including consulting, design, and implementation, to create an intuitive, user-friendly online platform
- Collaborated with stakeholders to gather requirements and ensure the website met business needs and enhanced client engagement
- Designed a responsive and visually appealing website, incorporating modern UX/UI principles and SEO best practices
- Delivered ongoing support and updates to maintain optimal site performance and user satisfaction

Customer Service Representative Lead

Gryphon's Athletic Center - University of Guelph

Guelph, ON

April 2023 - Present

- Supervised a team of customer service representatives, ensuring high-quality service delivery, effective communication, and adherence to center policies
- Played a pivotal role in driving membership and program sales by actively promoting offerings, identifying customer needs, and providing tailored recommendations
- Managed scheduling, training, and performance evaluation to foster team efficiency and professional development
- Provided exceptional customer support, addressing inquiries, resolving issues, and ensuring a positive visitor experience
- Acted as the primary point of contact for escalated concerns, demonstrating strong leadership and problem-solving skills

Head Lifeguard/Advanced Instructor

Gryphon's Athletic Center - University of Guelph

Guelph, ON

July 2018 - May 2023

- Supervised and mentored a team of lifeguards, ensuring compliance with safety protocols and maintaining a secure environment for all patrons
- Conducted advanced swim instruction and certification courses, including lifesaving and first aid training, tailored to various skill levels
- Managed pool operations, including scheduling, equipment maintenance, and adherence to health and safety standards
- Responded to emergencies with efficiency and professionalism, providing first aid and coordinating with emergency services when required
- Delivered exceptional customer service by addressing patron concerns, promoting aquatic programs, and fostering a welcoming environment

Interim Aquatics Supervisor

YMCA-YWCA of Three Rivers

Guelph, ON

June 2022 - Aug 2022

- Managed day-to-day aquatic operations, including staff supervision, scheduling, and ensuring adherence to safety and operational standards
- Led a team of lifeguards and instructors, providing training, mentorship, and performance evaluations to maintain a high level of service and professionalism
- Oversaw the delivery of aquatic programs, ensuring alignment with organizational goals and community needs
- Monitored and maintained facility and equipment standards, ensuring compliance with health and safety regulations
- Fostered a welcoming and inclusive environment, building strong relationships with staff and members to promote program engagement and community involvement

Projects

Human-Centered Training and Validation for Emotion Detection

University of Guelph, Computational Science Lab

Guelph, ON

May 2023 - Present

- Spearheaded an interdisciplinary approach to improve machine learning emotion detection models by integrating principles from Human-Computer Interaction (HCI), Psychology, and Artificial Intelligence (AI)
- Conducted a groundbreaking study incorporating evaluations from 25 human assessors to validate and refine emotion detection algorithms, uncovering critical gaps in model performance and emphasizing the importance of human oversight in AI training
- Demonstrated the potential for human-centered approaches to improve AI model validation, paving the way for more robust and ethically grounded emotion detection technologies
- Presented cutting-edge research findings to an audience of over 100 professionals at the Canadian AI 2024 Conference in Guelph, ON, showcasing the potential of human-centered methodologies in AI
- Delivered an engaging presentation at the Graphics Interface 2024 Graduate Symposium in Halifax, effectively communicating the project's significance and practical applications to a multidisciplinary audience

Emotive Translation Bubbles

University of Guelph, Computational Science Lab

Guelph, ON

Sept 2022 - May 2023

- Successfully authored and published an abstract on the project, which was accepted and presented at Graphics Interface 2023 (GI2023) in Victoria, BC, showcasing the innovative approach to emotion-driven translation
- Contributed to the design and development of the Emotive Translation Bubbles project, which leverages computational methods to explore and visualize emotion in multilingual text-based communication
- Focused on integrating machine learning and natural language processing (NLP) models to analyze and translate emotions across languages, enabling a deeper understanding of cross-cultural emotional expression

Precision Livestock Farming

Collaboration with University of Waterloo and University of Guelph, Computational Science Lab

Guelph, ON

May 2020 - Oct 2024

- Published a research paper titled "Systematic Literature Review of Vision-Based Approaches to Outdoor Livestock Monitoring with Lessons from Wildlife Studies," detailing insights into vision-based monitoring and its potential applications in precision farming
- Collaborated with a multidisciplinary team to integrate vision models into broader livestock monitoring systems, providing actionable insights for farmers
- Conducted data preprocessing and augmentation to build robust datasets for training models, addressing challenges such as occlusions, lighting variations, and diverse landscapes

Awards

Heroic Impact Award

Jan 18 2024

- Recognized for outstanding bravery and quick action in performing CPR and utilizing an AED to save the life of a Gryphon volleyball player during a medical emergency
- Demonstrated exceptional leadership, composure, and proficiency in first aid, serving as a role model for the university and the broader community

Client Services MVP Award

2023 - 2024

- Honored for exceptional contributions to client services, demonstrating outstanding dedication, professionalism, and a commitment to enhancing the client experience
- Recognized for leadership, effective communication, and consistent delivery of high-quality service to patrons and team members

Matrix Student Leadership Award

2022 - 2023

- Recognized as an outstanding leader and role model for peers, exemplifying qualities such as mentorship, inclusivity, professionalism, and a commitment to creating an enjoyable work environment
- Championed initiatives like monthly International Student Free Drop-In Swim Lessons, enhancing inclusivity and building connections within the community

- Demonstrated a strong commitment to creating a welcoming environment for both staff and patrons, emphasizing the value of personal interaction and engagement
- Actively recruited and trained National Lifeguards, ensuring alignment with shared Gryphon values and a culture of continuous development

Aquatics Instructor of the Year

2019 - 2020

- Honored for exceptional contributions to swim instruction, demonstrating outstanding teaching skills and a commitment to fostering a safe, engaging, and inclusive aquatic environment
- Recognized for going above and beyond in delivering high-quality programming, tailored to meet the needs of a diverse group of swimmers, from beginners to advanced participants