Youmna Elshimy

Career Objective

Recent Computer Science (Honours) graduate from the University of Wollongong, with passion for using data to make sense of the world. I am seeking a data analyst internship. I have a solid foundation in R, Python, SQL, NoSQL, machine learning, and data visualization. I have also explored more than just data. My portfolio includes a range of different projects from software development and UI/UX design to business-focused IT solutions. These experiences have taught me to think through problems from both a technical and a user-first perspective and have shaped how I approach challenges with curiosity and creativity.

I genuinely enjoy diving into data, uncovering patterns, and turning them into insights that can actually make a difference. Whether I am building models, visualizing trends, or working through messy datasets, I find real satisfaction in turning complexity into clarity. I am always learning, always exploring, and excited to see where data can take me next.

Technical Knowledge

- **Data Analysis & Processing:** Data Mining, Data Manipulation, Data Preprocessing, Exploratory Data Analysis (EDA)
- **Data Modeling & Management:** Relational Databases (MySQL, Oracle SQL), Non-Relational Databases (MongoDB), ETL (Extract, Transform, Load), ELT (Extract, Load, Transform)
- **Data Visualization & BI Tools:** Power BI, Microsoft Excel
- **Programming, Markup & Style Sheet Languages:** Python, R, Java, C++, HTML, CSS, JavaScript, AJAX, XML, XSLT, JSON
- **Machine Learning & AI:** Deep Learning Techniques, Machine Learning Techniques, Image Processing, Text Processing, Association Rules
- **Software & Tools:** RapidMiner, Apache Kafka, IDEs (RStudio, Google Colab, Jupyter Notebook, PyCharm, VS Code, IntelliJ IDEA, Eclipse, NetBeans, Code::Blocks, Android Studio), GitHub
- **Project Management Tools:** Jira, Trello, Gantt Charts

Education

Professional Year in IT   **Mar 2025 – Present**
QIBA, Sydney, Australia

Bachelor of Computer Science (Honours)   **Feb 2024 – Nov 2024**
University of Wollongong, Wollongong, Australia
Achievements – Distinction WAM

– Distinctions in Honours Research Project (CSIT499), Data Mining and Knowledge Discovery (INFO411), Big Data Analytics (CSCI446), and Research Methodology (CSIT440)

Bachelor of Computer Science (Software Engineering)   **Mar 2021 – Nov 2023**
University of Wollongong, Wollongong, Australia
Achievements – Undergraduate Excellence Award

– Leadership Learning Stream Award

– Collaboration & Communication Learning Stream Award

– UOWx Award

– Innovation and Community Award

– Distinction WAM

– High Distinctions in Project (CSIT321), Knowledge and Information Engineering (ISIT219), Database Systems (CSCI235), Marketing Principles (MARK101), and Networks and Communications (CSIT127)

– Distinctions in Algorithms and Data Structures (CSCI203), Software Engineering Practices & Principles (CSCI318), Enterprise Web Development (CSIT377), Mobile Application Development (CSIT242), System Analysis (CSIT114), Data Management and Security (CSIT115), and Human Computer Interaction (CSIT226)

Foundation Studies   **June 2020 – Feb 2021**
UOW College, Wollongong, Australia
Achievements – Outstanding Achievement Award

– High Distinction WAM

– High Distinctions in Chemistry (FSPW023), Computing Studies (FSPW029), Skills for Academic Studies 1 (FSPW101), English for Academic Studies 1 (FSPW102), Advanced Mathematics 1 (FSPW117), Physics (FSPW022), Skills for Academic Studies 2 (FSPW201), English for Academic Studies 2 (FSPW202), and Advanced Mathematics 2 (FSPW218)

Courses

Google Data Analytics Professional Certificate   Jan 2025 – Present
Google

Achievements – *Awarded the "Foundations: Data, Data, Everywhere" certificate in recognition of completing the "Foundations: Data, Data, Everywhere" course*
– Awarded the "Ask Questions to Make Data-Driven Decisions" certificate in recognition of completing the "Ask Questions to Make Data-Driven Decisions" course
– Awarded the "Prepare Data for Exploration" certificate in recognition for completing the "Prepare Data for Exploration" course

AWS Academy Cloud Foundations   Jul 2023 – Sep 2023
Amazon Web Services

Achievements – *Awarded the "AWS Academy Graduate - AWS Academy Cloud Foundations" badge in recognition of completing the "AWS Academy Cloud Foundations" course*

Academic Projects

Assessing Generalisation Gaps in Image Classification   Sep 2024 – Oct 2024
University of Wollongong, Wollongong

Objective: Build Python-based deep learning models to classify ImageNet images. The goal was to match the accuracies of two test sets, one from ImageNet and another from ImageNetV2 as much as possible and to analyse why the reasons for the performance gaps between them.

Tools: Google Colab, Python, Google drive, Google docs, Jupyter Notebook, Power BI

Duties: As the project manager of a team of six, I was responsible for keeping the project on track by assigning roles, setting deadlines, and coordinating team efforts. I also served as the facilitator during team meetings, ensuring discussions stayed focused and progress was regularly reviewed. On the technical side, I built a Convolutional Neural Network (CNN) model and trained it on the datasets. Initially, I trained, tested, and evaluated the model over 10 epochs to establish baseline performance. I then performed hyperparameter tuning to improve accuracy and generalization, followed by retraining and reevaluating the model over the same number of epochs. I also created visualizations to compare model performance before and after tuning for the datasets and documented all analysis and findings for reporting purposes.

Outcome: A report was written and submitted along with the source code. The results indicated that after tuning one dataset achieved an accuracy of around 0.89 and an F1-Score of 0.89. The other dataset's accuracy and F1-Score, on the other hand, was around 0.81. The reason for the difference in performance was likely because of the variations of the data in the datasets as one dataset had more homogeneous and structured clusters, while the other had smaller clusters with less separation and more fragmentation, suggesting greater variability and potentially more noise or outliers.

Result: Obtained High Distinction (19/20) for the project

Business Flow Microservices System   Aug 2024 – Sep 2024
University of Wollongong, Wollongong

Objective: Build a multi-tier e-commerce system that applies software engineering practices, incorporating Domain-Driven Design (DDD) with clearly defined bounded contexts, and using Event-Driven Architecture for communication between components.

Tools: Java (JDK 11), Spring Boot, Spring Web, Spring Data JPA, Spring Cloud Stream, Apache Kafka, H2 database, stream processing, GitHub, Google Drive

Duties: As the project manager of a team of three, I was responsible for keeping the project on track by assigning roles, setting deadlines, and coordinating team efforts. I also facilitated weekly meetings to ensure focused discussions and steady progress. In regard to the technical side of the project, I was responsible for building the Sales context, solving integration issues in the Procurement and Customer Account

services, and documenting the project's progress. Additionally, when a teammate faced persistent environment issues with the Analytics microservice, I took over and rebuilt it from scratch.

Outcome: A detailed report was submitted along with the source code. A presentation was also conducted in order to demonstrate the system. The resulting web application had 4 microservices, each operated within its own bounded context using Domain-Driven Design principles. Event-driven architecture with Kafka was also utilized enabling real-time communication and coordination between services. The Analytics service implemented stream processing to analyze product demand.

Result: Obtained High Distinction (40/45) for the project

Employment History

Exam Invigilator, Scribe, and Reader   Apr 2024 – Nov 2024
University of Wollongong, Wollongong, Australia

Duties:
- Reporting to the exam office half an hour before the start of the exam to receive instructions and the exam materials.
- Reading the exam instructions before the start of the test and making sure that no forbidden materials are allowed during the exam
- Handwriting on behalf of the student exactly as spoken by the student.
- Acting as the 'eyes' of the student and reading out loud the exam questions or the student's own answers or notes.
- Invigilating the student during the exam and ensuring that no cheating occurs.
- Writing brief reports about a particular exam - time started and finished, interruptions, student behaviour or comments, fire alarms, noise outside the room, etc.

Student Accessibility Peer   Feb 2024 – Nov 2024
University of Wollongong, Wollongong, Australia

Duties:
- Being conscientious and organised to support students with disability to have the best possible experience of university life.
- Working with students who have moderate access needs to achieve their stated goals in areas such as: laboratory & ICT facilitation and providing strategies for organisation.
- Mentoring and tutoring the students during their labs and help them in answering lab questions.
- Writing and reading the class materials and answers for the student when needed.
- Providing weekly reports of students' progress to the supervisors and reporting all critical incidents to them.

Student Brand Ambassador   Feb 2024 – Oct 2024
Campus Group, Sydney, Australia

Duties:
- Promoting the businesses of the companies and clients at various universities.
- Coming up with different marketing ideas to improve the client's business during the campaign.
- Setting up and packing down stalls at the universities to use for promoting the businesses.
- Holding and participating in various activities aimed at promoting the brands.
- Attracting students to the stall and exceeding daily sign-up targets for promotional campaigns, such as achieving 20 sign-ups per day during a DoorDash campaign with a goal of 10.
- Attending and actively participating in training sessions.

Student Accessibility Assist   Jul 2023 – Nov 2024
University of Wollongong, Wollongong, Australia

Duties:
- Cleaning and converting video transcripts created by an automatic speech recognition software
- Maintaining accuracy and consistency across transcripts to ensure clarity and ease of understanding for students with diverse learning needs.
- Identifying and correcting errors in technical terminology, names, and discipline-specific language to ensure transcript accuracy.
- Collaborating with the Student Accessibility and Inclusion team to ensure learning materials met accessibility standards and supported inclusive education.
- Accessing the video content and uploading the final transcript within 2 days of the content being uploaded.

Customer Solutions Specialist   **Mar 2023 – Mar 2023**
Probe CX, Wollongong, Australia

Duties:
- Handling inbound enquiries from voters within the required time frame during the NSW State Election period.
- Analysing voters' circumstances and providing accurate information or solutions in line with electoral policies.
- Addressing voter concerns and clarifying options related to voting methods, eligibility, and registration.
- Using electoral systems to accurately log voter interactions and update records in compliance with election protocols.
- Following NSW Electoral Commission procedures to ensure the accuracy and integrity of voter information and guidance.
- Participating in election-specific and customer service training sessions to stay updated on electoral processes and requirements.

Volunteer Work

EIS Student Mentor   **Jul 2024 – Nov 2024**
University of Wollongong, Wollongong, Australia

The EIS Student Mentor Program at the University of Wollongong supports students in the Faculty of Engineering and Information Sciences by helping them adjust to university life. I chose to volunteer to gain experience in peer mentoring and student engagement within an academic environment. My duties included guiding students through UOW systems, answering questions about lectures and resources, connecting them to support services, and organizing workshops on Python, web development, machine learning, and cryptography.

Achievement – Awarded a certificate of recognition for volunteering as a Student Mentor in the EIS Student Mentor Program

UoM Science Digital Industry Project Mentor   **Jun 2024 – Jul 2024**
Practera, Sydney, Australia | University of Melbourne, Melbourne, Australia

The University of Melbourne's Science Digital Industry Project, in collaboration with Practera, connects students with real-world industry experiences through project-based learning. I volunteered as a mentor to develop my leadership and coaching skills in a collaborative academic setting. My duties included meeting weekly with a student team, providing feedback on reports and deliverables, guiding them in preparing for the final presentation, and helping them reflect on their experiences to stay motivated and engaged throughout the program.

Achievement – Awarded a certificate of recognition for volunteering as a Mentor in the UoM Science STEM Digital Industry Project

Technology Assistant Volunteer   **Mar 2024 – Jun 2024**
Illawarra Multicultural Services, Wollongong, Australia

Illawarra Multicultural Services supports people from culturally and linguistically diverse backgrounds in the Illawarra region. I volunteered as a Technology Assistant to apply my technical skills in a meaningful way and gain experience working in a community-focused environment. My duties included fixing electronic device issues, assisting non-English speakers with setting up essential accounts like MyGov, and delivering digital literacy sessions on topics such as online scams, device care, and AI. I also tailored content for different age groups and attended training sessions.

Volunteer   **Jul 2022 – Nov 2024**
UOW Pulse, Wollongong, Australia

UOW Pulse supports student life at the University of Wollongong by offering programs and services that enhance wellbeing and community engagement. I volunteered to get more involved in campus life and support initiatives that make a direct impact on student wellbeing. As a Pantry Leader at the Pulse Pantry, I managed volunteers, maintained stock levels, ensured smooth operations during opening hours, recorded student visits, and addressed issues to help the pantry run effectively. I also volunteered at student events such as Orientation Week and Clubs Day, assisting with food service, event setup, and pack-down.

Achievement – Named the Volunteer of the Month in February 2024

– Awarded the certificate of Innovation & Community Award in recognition for commitment to volunteering throughout 2024

Learning Labs Volunteer   **Jul 2022 – Nov 2022**
University of Wollongong, Wollongong, Australia
UOW Learning Labs is an academic enrichment program for high-achieving students in Years 1 to 10, offering intellectually stimulating workshops across various subjects. I volunteered to gain experience in mentoring students in an educational setting. My duties included assisting in workshops, supervising students, supporting presenters and teachers, guiding guardians around the campus, and reporting any issues to supervisors to ensure a safe and engaging environment for all participants.

Achievement *– Awarded a certificate in recognition for commitment to volunteering as a Learning Labs Volunteer*

Study Australia Industry Experience Program Participant   **Nov 2021 – Jan 2022**
University of Wollongong, Wollongong, Australia
The Study Australia Industry Experience Program connects international students with real-world industry projects to develop practical skills and cross-cultural collaboration. I joined the program to gain hands-on experience working with diverse teams and real clients. My team developed a business solution for Murri's on the Move Driving School (MOTM), a not-for-profit organization, with the goal of improving its financial sustainability. I contributed to research, strategy development, and presenting actionable recommendations to the client.

Achievement *– Awarded the "Deal Book Program Completer" badge in recognition for completing the Study Australia Industry Experience Program's Deal Book Program*

Personal Attributes

- **Time Management & Organization:** Successfully balanced academic, project, and volunteering commitments, maintaining a Distinction WAM.
- **Leadership & Teamwork:** Led a deep learning classification project with a team of six, ensuring efficient collaboration.
- **Communication Skills:** Mentored students at UOW Learning Labs, assisting in workshops and guiding diverse student groups.
- **Analytical Thinking & Problem-Solving:** Developed business strategies in the Study Australia Industry Experience Program.

References

Available upon request