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## Education

### University of Management and Technology

Bachelor of Science in Software Engineering. GPA: 3.7/4.0

Lahore, Pakistan

Expected Graduation: February, 2027

**Relevant Coursework:** Data Structures & Algorithms, Database Systems, Software Architecture, Software Engineering, Object-Oriented Programming (OOP), Computer Networks, Operating Systems

### Queen Mary College

Intermediate Pre-Engineering

Lahore, Pakistan

2020-2022

Grade: A

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## Projects & Certificates

### Academic projects

#### 1. Django User Authentication & Profile Management Web Application

- Engineered a secure authentication and profile management system using Django's built-in authentication framework.
- Implemented user registration, login/logout, and session-based access control.
- Designed a custom Profile model (One-to-One with User) for extended user data.
- Developed profile update functionality with image upload and server-side validation.
- Applied server-side validation, template inheritance, and modular project organization for maintainability.

#### 2. Desktop Application – PyQt5 & Qt Designer

- Developed a GUI-based desktop application using Qt Designer for frontend design and Python (PyQt) for backend logic.
- Implemented event-driven programming and modular architecture separating UI and business logic.
- Integrated persistent data handling using file/database storage.
- Applied object-oriented programming principles for structured and maintainable code.

#### 3. Dynamic CV Builder – HTML, CSS, JavaScript

- Built a client-side web application enabling users to generate structured CV templates through form-based input.
- Implemented real-time DOM manipulation for dynamic CV rendering.
- Designed responsive layouts using HTML5 and CSS3.
- Applied client-side validation for accurate and structured data handling.

#### 4. Event Management System – Java

- Developed an event scheduling and registration platform using 5 design patterns.
- Increased modularity and reduced code duplication by 25%, enhancing long-term maintainability.

#### 5. Online Shopping System – C++

- Built an object-oriented shopping platform managing 50+ products, supporting cart operations and simulated checkout.
- Applied modular class design to improve code reuse and maintenance by 30%.

#### 6. Smart Home Automation & Control System — Entrepreneurship Project

- Built a remote-controlled switch for wireless on/off control of lights, fans, and appliances, improving home convenience.
- Tested prototype with ~15 % energy savings and presented for pilot evaluation.

### Independent Project

- Built a responsive portfolio website using HTML, CSS, and JavaScript to showcase 10+ academic and personal projects.
- Designed and optimized an e-commerce database schema in MySQL, structuring 8 core tables, applying 3NF normalization, and enforcing relational constraints for scalability and data integrity.

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## Certificates

### Responsive Web Design – freeCodeCamp

- Completed a structured online program covering HTML5, CSS3, and responsive layout techniques, building 20+ practice projects to strengthen front-end skills.

### Web Design for Web Developers – Udemy

- Completed an online course on modern UI principles, color theory, and responsive design, applying best practices to build and refine multiple sample web pages.

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## Technical skills

- Programming Languages: Python, Java, C++, HTML5, CSS3, JavaScript, SQL
- Frameworks & Libraries: Django, React, Node.js, PyQt5
- Security & Systems: Kali Linux, Cisco Packet Tracer
- Tools & Version Control: Git, GitHub, VS Code