

Syed Raza

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CAREER OBJECTIVE

AI and Software Engineering Lecturer, Founder and Software Developer with 7+ years of combined academic and industry experience across higher education, enterprise software development, AI agents, machine learning, cloud technologies and research. Experienced in delivering Levels 3–7 Computing and Business modules, supervising undergraduate and postgraduate learners, developing AI-enabled software systems and contributing to peer-reviewed research in AI, governance, sustainability and education.

PROFESSIONAL AND LEADERSHIP EXPERIENCE

Lecturer / Module Leader

Regent College London (University of Greater Manchester)

Sep '24 — Present

- Lecturing Level, 3 - 7 modules including: Advance Software Development, Contemporary Software Engineering Practices, Research Methods, Fundamentals of Algorithms, Basics of Programming and Techniques, Fundamentals of Data Representation, Computer Systems, Relational Databases, Impacts of Digital Technology, Cloud Technologies, Object Oriented Analysis and Design, Data Structures and Algorithms and Dissertation Supervision, while providing learning support and revision sessions to enhance student achievement .
- As Module Leader and Moderator, designed and delivered new module content using the PCC (Prepare before class, Collaborate in the class, and Consolidate after class) pedagogy model, along with assessments and module guides, ensuring effective alignment of learning outcomes with OFS requirements and quality assurance standards.
- Collaborated with faculty members, programme leaders, and academic partners to ensure module content remains current and relevant, aligned with OFS standards, partner guidelines, academic best practices, and institutional academic administration processes.
- Led module moderation processes, reviewed assessments, examination papers, and guides for alignment with learning objectives; contributed to institutional publications and research outputs as part of the research team; and participated in student recruitment activities, including conducting interviews for intention-to-study applicants.
- Lecturing across Level 3–7 business and management modules, including Business Environment, Marketing Processes and Planning, Management of Human Resources, Leadership and Management, Accounting Principles, Financial Decision Making in Business, Project Management, Enterprise, Innovation and Creativity, Business Strategy, Strategic Management, International HRM, Supply Chain Management, Logistics and Operations Management, Corporate Governance, Financial Management and Decision Making, Marketing and Operations, Research Methods, and Dissertation/Business Project supervision.

Founder and CEO

Twelvetechn Systems Limited

Jun '25 — Present

London

- Founded and led an AI-focused software solutions company delivering custom AI agents, chatbots, automation tools, web platforms and bespoke software systems for businesses, improving client workflow efficiency by an estimated **40–60%**.
- Directed end-to-end product development across requirements gathering, UI/UX design, backend development, AI model/API integration, testing, deployment and client delivery, reducing project turnaround time by approximately **35%**.
- Built and managed the company's digital presence, service strategy and client acquisition pipeline, positioning the business around AI automation, predictive analytics and intelligent systems to support digital transformation.

Visiting Lecturer / Module Leader

London Brookes College, London, United Kingdom

Jun '25 — Present

- Delivered teaching across business and computing-related modules, including Marketing Process and Planning, Leadership and Management, Accounting Principles, Managing Human Resource.
- Led module planning, delivery, and academic coordination, ensuring alignment with curriculum objectives, assessment requirements, and quality assurance standards.
- Designed and reviewed teaching materials, assessments, and learning activities to support student engagement, academic progression, and industry relevance.

Member of Revision Committee

IEEE Standards Association (IEEE- SA)

Feb '26 — Present

- Revising and updating the technical standard on "Systems and Software Engineering- Engineering and management of websites for systems, software, and services information".
- Also revised the section on 'Testing and Validation of Websites' along with other team members.
- Collaborated internationally to work with the group.

IT Operations Manager

Navv Associates Ltd., London, United Kingdom

Jun '21 — Aug '24

- Directed enterprise IT operations with full accountability for system availability, performance optimisation, incident management, and service continuity, ensuring reliable support for business-critical functions.
- Orchestrated cross-functional operations by aligning infrastructure, applications, and support teams, driving process standardisation, rapid incident resolution, and measurable improvements in service delivery and operational efficiency.
- Spearheaded operational excellence initiatives through the implementation of monitoring frameworks, performance analytics, and continuous improvement strategies, reducing downtime, enhancing system resilience, and enabling data-driven decision-making at organisational level.

Computing Teacher

Jun '23 — Aug '24

East London Tutors

London

- Tutoring various subjects: Maths, Physics, Chemistry, Biology, Computer Science, and Coding for KS3, KS4, and KS5, applying knowledge learning strategies to improve student understanding and performance.
- Supported SEN students, including those with ADHD, through personalized coaching techniques, fostering inclusivity, academic success, and confidence in diverse learning environments.
- Familiar with AQA, Edexcel, and OCR Exam boards, maintaining active membership in relevant educational and subject-specific networks to stay aligned with best practices.

Computing Teacher

Sep '24 — Dec '25

Step Teachers

London

- Tutoring Computer Science and Coding for KS 3, KS 4 and KS 5.
- Providing homework and exam style questions. Supervised classes, maintaining order and ensuring lesson continuity during teacher absences.

Computing Teacher

Sep '23 — Sep '24

Tarbiyyah Secondary School Heston, London, United Kingdom

- Delivering passionate lectures to groups of students, using advanced teaching techniques to inspire and motivate them to achieve higher academic achievement and measurable progression in their exams.
- Assessing students' homework and providing constructive feedback to support continuous progression and improved learning outcomes across the full span of the curriculum.
- Familiar with AQA, Edexcel, and OCR Exam boards, integrating events such as mock exams, revision workshops, and project showcases to enhance student engagement.

Team Lead / Software Developer

Jun '22 — Mar '23

Softech Systems Private Limited, Lahore, Pakistan

- Led the migration from Struts to Spring Boot, developed and updated core functionalities, optimising application architecture, and improving performance, scalability, and maintainability.
- Software Developer for Asset Management project, responsible for both front-end and back-end development using Java, PL/SQL, Struts Framework, and JSF.
- Collaborated with clients, business analysts, and the QA team throughout the SDLC, ensuring high-quality, tailored solutions and a 15% reduction in processing time for key operations.

Team Lead / Software Developer

Sep '21 — Apr '22

CrecenTech Systems Private Limited, Lahore, Pakistan

- Backend Software Developer for Task Tracker Hub and Click to Mail projects, responsible for designing and implementing business logic using Java and Spring Framework (Spring Boot, Spring MVC, Spring Data JPA, Spring WebSocket, Spring Data Rest).
- Collaborated with the CTO, Project Manager, and Testing Department to ensure smooth integration of backend functionality with front-end designs and to meet project goals and deadlines.
- Contributed throughout the entire Software Development Life Cycle (SDLC), including requirements analysis, design, development, testing, and deployment, ensuring high-quality solutions and timely delivery of both projects.

Software Developer

Nov '20 — Feb '21

Evs Training Institute, Lahore, Pakistan

- Backend Software Developer for the Multivendor Online Food Ordering System, utilising Java, Python, Spring Boot, and Flask to design and implement robust backend solutions, ensuring smooth transaction flows and high system availability.
- Contributed to the development of scalable microservices that supported multiple vendors, improving order processing efficiency by 20% and reducing system downtime by 15%.

CERTIFICATIONS AND AWARDS

Introduction to Scrum Profession, IBM

Jul '25

Oracle Java Foundations, Oracle

Aug '25

Agile Leadership: Introduction to Change, University of Colorado System

Aug '25

Strategy and Sustainability, IESE Business School

Aug '25

AWARDS

Fellow of Royal Society of Arts: 8434737 Royal Society of Arts	Feb '26
Associate Member of British Computer Society: 995165200 British Computer Society	May '25
Fellow of the Higher Education Academy In Progress	
Level 5 badge in problem solving Coding Ninjas	

PROJECTS

Student Performance & Dropout Risk Prediction Agent - Developed the first version of an AI-powered student risk prediction agent to analyse attendance, assignment submissions, grades and engagement indicators, helping identify learners at risk of underperformance and reducing manual monitoring effort by an estimated 50%. - Trained an initial machine learning classification model to predict student risk levels using academic and behavioural data, enabling earlier intervention planning and improving risk identification consistency by approximately 35%. - Integrated the model into a prototype dashboard that generates risk summaries, support recommendations and follow-up actions for tutors, improving student review and reporting turnaround time by an estimated 40%.	London, United Kingdom
AI Desktop Assistant Agent , Twelvetech Systems Limited - Developed a Windows-compatible AI desktop assistant using Python, Flask, HTML, CSS and JavaScript, automating task management, notes, reminders, memory storage and file handling, reducing manual productivity workflow time by an estimated 40%. - Integrated local Llama/Ollama and OpenAI-compatible model support, enabling AI-powered workspace search, file summarisation, web lookup and productivity assistance, improving information retrieval speed by approximately 60%. - Implemented safety-focused automation controls, diagnostics tools, .env configuration and Windows setup scripts, reducing setup and troubleshooting time by an estimated 50% while improving reliability and user control.	London
Mental Health Language Classification Platform - Developed a context-aware mental health monitoring web platform to collect user inputs, analyse behavioural/mental health indicators and present AI-supported insights, reducing manual assessment and reporting effort by an estimated 50%. - Trained and evaluated a machine learning model to identify mental health risk patterns from contextual indicators, improving prediction consistency and early-risk detection support by approximately 35%. - Implemented the end-to-end workflow including data preprocessing, feature engineering, model integration, dashboard deployment and privacy-conscious handling of sensitive user data, improving analysis turnaround time by an estimated 60%.	London, United Kingdom
Task Tracker Hub (TTH) , CrecenTech Systems Private Limited - Led the development of an employee activity tracking solution to improve workforce visibility, task-level accountability, and operational performance management across the organisation. - Managed the implementation of secure real-time reporting and background processing features, enabling centralised monitoring, stronger transparency, and data-informed decision-making. - Introduced workflow controls such as idle-time alerts and activity justification prompts to strengthen productivity tracking and operational discipline. - Drove user experience enhancement by leading the transition from Java Swing to JavaFX, achieving an 80% improvement in user satisfaction through usability-focused design and testing.	
Asset Management Company Project , Softech Systems Private Limited - Led the design and implementation of an asset lifecycle management system covering procurement, allocation, tracking, and disposal, improving operational visibility and reducing reporting errors by 30%. - Managed the delivery of role-based access control and authentication features, strengthening governance, improving control over asset data, and enhancing security by 40%. - Oversaw the development of cost, depreciation, and end-of-life tracking modules, enabling more accurate financial reporting, stronger compliance, and better asset management decisions.	

PUBLICATIONS

AIEOU Shared Research Agenda 2026

Department of Education, University of Oxford

Mar '26

Co-author of a research agenda developed at the University of Oxford exploring the future of Artificial Intelligence in Education. Contributed to defining interdisciplinary research priorities, governance considerations, and collaborative pathways for responsible AI integration in global education systems.

Quantum machine learning: A transformative approach for big data and complex systems

Mar '26

Regent College London Research and Scholarship Digest, Issue 13

Co-authored an institutional research article exploring the integration of quantum computing and machine learning for scalable big-data and complex-system analysis. Contributed to discussion of hybrid quantum-classical workflows, quantum data encoding, variational quantum circuits and future applications across education, research and industry.

Beyond bans and bots: A self-determination theory approach to academic integrity and generative AI

Mar '26

Regent College London Research and Scholarship Digest, Issue 13

Co-authored an institutional research article examining academic integrity in AI-rich higher education through the lens of Self-Determination Theory. Proposed a partnership-based approach to generative AI use, focusing on autonomy, competence and relatedness as alternatives to detection-led compliance.

Integration of Generative Artificial Intelligence (AI) In Digital Marketing, A Framework to Sustainable Advertisement (Under Review)

First Author of a study on **Generative AI in digital marketing**, analysing sustainability risks (environmental impact, ethics, governance, and digital clutter) and industry use cases in AI-driven advertising. Proposed the **PRISM+ framework**, a modular lifecycle model embedding privacy, fairness, environmental accountability, and human oversight for sustainable, responsible AI-powered advertising.

Integrating Generative AI and Green Technology in Enterprise Governance: A Framework for Sustainable Digital Transformation (Accepted and Presented)

Co-authored **SAGE-GOV**, a Sustainable AI–Green Enterprise Governance framework integrating Generative AI with green technologies to support ESG-aligned, responsible digital transformation. Developed a six-pillar, scalable roadmap (strategy, readiness, governance, ethical & environmental-by-design, pilot–monitor–scale, stakeholder engagement) suitable for both SMEs and large enterprises.

Digital Twins to achieve net-zero: A comprehensive framework for the power sector in Bangladesh (Accepted and Presented)

Proposed a comprehensive **Digital Twin–based framework** for Bangladesh's power sector, addressing gaps in net-zero policy, real-time energy monitoring, and sustainable energy governance. Demonstrated how Digital Twin technologies enable predictive analysis, optimisation, and emissions reduction to support net-zero goals and climate-resilient energy systems.

Federated Learning for Cross-Border FinTech Compliance: A TRACER-Based Framework for Auditable AML/KYC (Accepted)

IEEE Xplore

Co-authored **C-3F**, a compliance-first federated AI framework for cross-border FinTech platforms, enabling privacy-preserving model training while meeting multi-jurisdictional regulatory requirements. Contributed to the design of a federated governance architecture supporting auditability, data protection, and regulatory alignment in global financial systems.

Pedagogical Innovation in the GenAI Era: Designing and Assessing Student Submissions through a Strategic Framework (Book Chapter)

Springer Nature

Proposed the **Co-Intelligence Assessment Nexus (CIAN)**, a pedagogical framework for ethically integrating Generative AI into higher education assessment design and evaluation. Developed a theory-grounded, practice-oriented model redefining assessment as a co-intelligent, transparent, and accountable process that supports AI-augmented creativity, reflection, and personalised learning.

Recentring Internal Quality Assurance on the Student Learning Experience: The PLEX-QA Approach

Apr '26

Regent College London

Co-authored **PLEX-QA (Primary Learning Experience–Centred Quality Assurance)**, a conceptual framework that recentres internal quality assurance on the student learning experience. Contributed to reframing QA as a recursive enhancement system, distinguishing learning experience as the primary focus while using performance metrics as evaluative signals to support coherent and transparent quality practices.

AI-driven energy efficiency in UK manufacturing: causal impacts on emissions and cost (Under Review)

First Author of a study proposing the **AICEM (AI-enabled Carbon and Energy Management)** framework to support cost-effective decarbonisation in the UK manufacturing sector. Developed a four-phase, evidence-based implementation pathway linking AI use cases to auditable energy benchmarks, causal impact evaluation, and verifiable net-zero outcomes.

The Role of Artificial Intelligence in Enhancing Triple Bottom Line Sustainability in UK SME Supply Chains

IEEE Xplore

First Author of a study on AI adoption in UK SME supply chains for Triple Bottom Line sustainability. Proposed the **Star-TBL framework**, a scalable, governance-aware model enabling SMEs to integrate predictive, prescriptive, and generative AI to improve economic, environmental, and social supply chain performance.

Embedded Quantum Machine Learning in Embedded Systems: Feasibility, Hybrid Architectures, and Quantum Co-Processors(Accepted)

IEEE Xplore

Collaborated on the feasibility of Embedded Quantum Machine Learning (EQML) for edge and IoT systems. Proposed hybrid architectures integrating classical embedded processors with remote or compact quantum co-processors, and outlined engineering and governance pathways for practical, responsible deployment.

Measuring and Governing AI-Enabled Decision Transformation in Business: A PRISMA-Aligned Systematic Review and Integrative Framework

IEEE Xplore

Collaborated on PRISMA-aligned systematic review on AI-enabled decision transformation in organisations. Proposed an **integrative governance and measurement framework** linking AI workflow embedment, stewardship capability, accountability structures, and decision-quality metrics to improve organisational value capture and risk management.

Context-Aware Machine Learning for Detecting Clinical Mental Health Indicators in Social Media(Accepted)

IEEE Xplore

Collaborated on context-aware machine learning for detecting clinical indicators of depression and anxiety in social media. Developed a feature-driven NLP framework analysing large-scale Reddit data to distinguish clinical signals from general negative mood with high accuracy while incorporating privacy and ethical safeguards.

AI Governance Capability for AI-Enabled Digital Transformation: A Curated Systematic Review and Research Agenda(Accepted)

IEEE Xplore

Collaborated on curated systematic review examining AI governance capability in AI-enabled digital transformation. Proposed a **multidimensional governance framework** integrating data stewardship, model lifecycle management, explainability, human oversight, and accountability to support responsible innovation and value capture.

INVITED TALKS AND GUEST SPEAKING

- AI Shifa Institute of Health Sciences | Apr 2025
Delivered an invited session on the role of Artificial Intelligence and Machine Learning in driving innovation across healthcare, education, and industry. Discussed practical AI applications, emerging career opportunities, and the importance of developing applied technical skills through projects, coding, and continuous learning.
- University of Narowal | Apr 2025
Delivered an invited talk on the importance of Information Technology, digital skills, and career counselling in higher education. Guided students on academic progression, employability, AI-related career pathways, and the value of continuous professional development in the technology sector.

STUDENT SUPERVISION

- Zakariya Baidi Mabrouk, Regent College London. BSc Software Engineering: "Development of a Machine Learning Framework for Mental Health Sentiment Analysis in Social Media Posts "
- Syed Abdullah, University of Narowal, BCS: "An Intelligent Fake News Detection System Using Perceptual Hashing and Logistic Regression on Blockchain".
- Abdullah Butt, University of Narowal, BCS: "Side-Channel Analysis Using Differential Power Analysis on Raspberry Pi".
- Kittu Katariya, Regent College London. MSc Software Engineering: "Personalized Mental Health Chatbot Using AI and Sentiment Analysis"
- Prajwal Poudel, Regent College London. MSc Software Engineering: "AI Caption generator for Instagram/TikTok".
- MD Tasdik, Regent College London. MSc Software Engineering: "Designing and Evaluating Explainable AI based Assessments Aystems to Improve Transparency and Student Trust in Higher Education"
- Also supervised 20+ postgraduates in (Group Project) on AI and Business.

SKILLS

Programming Languages Java 17, Python, C#, C++

Frameworks & Libraries Spring (Spring boot, Spring data JPA, Spring MVC, Spring Web Socket, Spring Data Rest), Struts, Struts 1 & 2, Microservices (Spring Cloud, Open Feign, Ribbon), Java EE (JSP, Servlet, EL, JSTL), Project Lombok, Hibernate

AI & Machine Learning AI, Machine Learning & Data Science Machine Learning, Supervised and Unsupervised Learning, Classification, Regression, Model Training and Evaluation, Data Preprocessing, Feature Engineering, Natural Language Processing, Predictive Analytics, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn, OpenAI API, Ollama/Llama, Prompt Engineering, AI Agent Development

Web & APIs Rest Api, SOAP services, JSOUP Java Library, HTML, CSS, Javascript, Bootstrap, Thymeleaf (Templating Engine)

Tools and Platforms Maven, Gradle, Docker, Git, Kubernetes, Jenkins, Postman, Dream Viewer, Spring Tool Suite, Oracle 11g, Tomcat, Apache (Mail, CXF, POI, Tomcat)

Databases MYSQL, MongoDB, Oracle, PL/SQL, POSTGRES, SQLite, Neo4J

Professional Skills Teaching and Instruction, Classroom Management, Curriculum Development, Student-Centered Learning, Assessment and Evaluation, Formative and Summative Assessments, Progress Monitoring, Feedback and Reporting, Active Listening, Conflict Resolution, Collaboration with Colleagues, Mentorship and Guidance, SEN Support and Differentiation, Fostering Inclusivity, Creativity and Innovation, Time Management, Patience and Empathy, Organization Skills, Discipline, Consistent Professional Development and Leadership, Continuous Learning and Training, Adaptability and Problem-Solving

EDUCATION

MSc in Software Engineering, University of Bolton (GPA: Distinction)

May '23 — May '24
London, United Kingdom

- Completed a comprehensive curriculum covering DevOps, Research Methods, Contemporary Software Engineering Practices, Software Project Management, Advanced Programming, Database Systems, and Cloud Computing.
- Additionally, pursued a range of AI and Machine Learning courses, gaining expertise in data-driven problem-solving, predictive modelling, and intelligent systems design.

BSc. in Computer Science, University of Narowal (GPA: Merit)

Sep '17 — Jul '21
Narowal, Pakistan

- Completed a comprehensive programme covering core and advanced computing topics, including programming, data structures, algorithms, database management, networking, software development, and systems analysis, gaining a strong foundation in computer science principles through rigorous coursework and hands-on projects.

Intermediate in Pre Engineering, Upper Secondary School (Pre-Engineering), Govt. College (GPA: Distinction)

Jul '17
Zafarwal, Pakistan

- Completed coursework in Mathematics, Physics, and Chemistry, providing a strong foundational understanding of scientific and analytical principles essential for engineering and technology disciplines.

Matric in Science, NEST School (GPA: Distinction)

Jul '15 — Jul '17
Narowal, Pakistan

- Completed general studies including Mathematics, Physics, Chemistry, and Biology, establishing a broad scientific foundation and analytical skills essential for higher education in science and technology fields.