

Sayyda Sahar Fatima

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EDUCATION

NED University of Engineering and Technology <i>Masters of Science in Data Engineering and Information Management</i>	CGPA: 3.89 Nov. 2020 – Oct 2022
Habib University <i>Bachelor of Science in Computer Science</i>	CGPA: 3.45 Aug. 2016 – July 2020
Govt. Degree College, Malir Cantt, Karachi <i>Intermediate of Science in Pre-Engineering</i>	Grade: A-1 (84%) May. 2014 – Aug. 2026
The Citizens Foundation School <i>Matriculation of Science in Computer Science</i>	Grade: A-1 (90%) May. 2012 – April 2014

EXPERIENCE

Lecturer <i>NED University of Engineering & Technology</i>	Aug 2025 – Present Karachi, PK
<ul style="list-style-type: none">Instructed undergraduate students in core curriculum including Data Structures and Algorithms, IT Fundamentals and Applications, and complementary computer science subjects.Developed and delivered lectures, assignments, and projects to bridge theoretical concepts with practical programming and problem-solving skills.	
Visiting Faculty <i>NED University of Engineering and Technology</i>	Oct. 2022 – Present Karachi, PK
<ul style="list-style-type: none">Instructed graduate-level students in advanced Cybersecurity and Audit domains, including Data Security & Audit, Data Encryption, and Information Systems Audit.Developed and delivered a specialized curriculum encompassing cryptographic theory, audit frameworks (e.g., COBIT, NIST), and emerging threats to prepare students for industry certifications and senior roles.	
Software Engineer <i>10Pearls Software Inc</i>	Jan 2022 – April 2022 Karachi, PK
<ul style="list-style-type: none">Promoted to Software Engineer within one year for demonstrating strong technical proficiency and client management skills.Developed and maintained full-stack web applications for clients using React.js, Angular, and Python, contributing to multiple projects from conception to launch.Served as a direct technical point of contact for clients, gathering requirements, presenting project demos, and incorporating feedback to ensure deliverables met business objectives.Collaborated in an agile team environment to design, develop, and deploy scalable software solutions, ensuring robust and maintainable code.	
Associate Software Engineer <i>10Pearls Software Inc</i>	Feb 2021 – Jan 2022 Karachi, PK
<ul style="list-style-type: none">Developed full-stack web applications for clients using React.js, Angular, and Python in an Agile environmentServed as a direct technical contact for clients, gathering requirements, demonstrating progress, and incorporating feedback.Contributed to multiple projects through the entire software development lifecycle, from conception to deployment	
Trainee Software Engineer <i>Afiniti Software Company</i>	Nov 2020 – Jan 2021 Karachi, PK
<ul style="list-style-type: none">Developed and maintained services and applications using C++ within a professional engineering environment.Gained hands-on experience in the full software development lifecycle, from design and coding to testing and deployment.Collaborated with senior engineers to troubleshoot issues, refine code, and implement best practices.	

RESEARCH

Master's Research Thesis: Comparative Analysis of Agile vs. Traditional Methods Nov 2021 – Oct 2022

- Conducted a mixed-methods research study analyzing quantitative project data (on-time delivery, budget adherence) and qualitative case studies from software teams.
- Evaluated the correlation between development methodologies (Agile: Scrum, Kanban; Traditional: Waterfall) and key success metrics, controlling for team size and project complexity.
- Synthesized findings into a comprehensive model for selecting optimal project management frameworks based on specific project requirements.
- Concluded with data-driven recommendations highlighting the contextual superiority of iterative approaches in volatile development environments.

PROJECTS

Final Year Project – InstaWeight | *Python, Django, HTML, CSS, Bootstrap* Aug 2019 – May 2020

- Collaborated with Folio3 to develop an autonomous cattle weight estimation system using Deep Learning and Computer Vision.
- Engineered and deployed predictive models that analyze image data to generate accurate mass predictions, streamlining a manual process.
- Designed and developed a full-stack admin panel for system management, data visualization, and result monitoring.

Habib University Data Repository | *HTML5, CSS3, Bootstrap, Django2* Spring 2019

- Designed and developed a full-stack web application to serve as a centralized data repository for the university
- Engineered a secure and scalable database architecture to efficiently store, categorize, and retrieve academic data and resources.
- Implemented a user-friendly interface focused on accessibility and ease of navigation, ensuring a seamless experience for students and faculty.

Image Colorization using Artificial Neural Networks Spring 2018

- Designed and implemented an Artificial Neural Network (ANN) in Python to automatically predict and apply RGB color values to grayscale images.
- Preprocessed a large dataset of images for training, including normalization and conversion between color spaces (RGB to LAB).
- Trained the model to learn the complex mapping between luminance data and chrominance values, successfully generating plausible colorizations.

TECHNICAL SKILLS

Languages: Python, C/C++, SQL (Postgres), JavaScript, HTML/CSS

Frameworks: React, Node.js, Flask, WordPress, CodeIgniter

Developer Tools: Git, Docker, Google Cloud Platform, VS Code, Visual Studio, Jupiter NoteBook

Libraries: pandas, NumPy, Matplotlib

HONORS & AWARDS

President's List Award (2019)

Awarded for exceptional academic performance, placing on the Dean's List for two consecutive semesters.

Dean's List Award (Fall 2019, Spring 2019)

Recognized for ranking among the top 10 students by GPA in the cohort.

TOPS Merit Scholarship (2016)

Awarded a fully-funded scholarship based on outstanding academic merit and potential.

Silver Medal Award (2014)

Achieved A-1 Grade (90%) in Matriculation Board Examinations.

TCF Excellence Grant (2014)

Granted for securing the highest percentage in matriculation examinations at the institution.

Best Performance Award (2012)

Achieved the highest academic percentage in the school.

REFERENCES

Prof. Dr. Syed Zafar Qasim

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