Samina Kalwar

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SUMMARY

Software Engineer with strong expertise in AI, Data Science, and Full Stack Web Development. Hands-on experience building intelligent systems, scalable MERN applications, and production-ready ML pipelines. Passionate about developing high-performance applications using React, Node.js, Python, TensorFlow, and cloud-based data workflows.

SKILLS

Web Development: HTML, CSS, JavaScript, React.js, Node.js, Express.js, REST APIs, MERN Stack, Next.js
AI & Data Science: Machine Learning, Deep Learning, NLP, Time-Series Forecasting, Feature Engineering, Data Visualization
Languages: Python, JavaScript, SQL, Java, C++
Libraries/Tools: NumPy, Pandas, Matplotlib, TensorFlow, Keras, PyTorch, OpenCV, Jest, Mocha, Chai
Databases & Cloud: MongoDB, MySQL, Docker, AWS (basic)
Others: Git, GitHub, VS Code, SonarQube, Airflow, CI/CD
Soft Skills: Communication, Problem-solving, Adaptability, Collaboration

EDUCATION

Sukkur IBA University, Pakistan   *Graduated: June 2025*
Bachelor of Science in Computer Science
CGPA: 3.39 / 4.00   **Scholarship:** Merit-Based
Relevant Coursework: Deep Learning, Data Science, AI, Web Engineering, Enterprise App Development, Networking, Databases, Blockchain

PROJECTS

AQI Prediction System (ML + Time Series)   *Ongoing-2025*
End-to-end air quality forecasting system using Machine Learning and Deep Learning models.

- Developed an LSTM-based model for 3-day AQI forecasting with optimized feature engineering.
- Built data pipelines using Pandas, Scikit-learn, and TensorFlow.
- Designed interactive dashboards using Streamlit to visualize real-time AQI insights.

Notes App (MERN Stack)   *Sep 2025– Nov 2025*
MERN-stack Notes Management app with user authentication and RESTful APIs.

- Implemented CRUD operations with Express.js and MongoDB.
- Integrated Jest and Mocha/Chai for backend and component unit testing.
- Designed secure login, logging middleware, and user-specific note access.

Final Year Project: Haaribot – Autonomous Agricultural Robot   *Aug 2024 – May 2025*
AI-powered robot using YOLOv5, Jetson Nano, and solar energy for GPS-free farming automation.

- Achieved 96% precision in row detection using YOLOv5 and OpenCV.
- Integrated Arduino with IoT sensors for autonomous control.

E-Commerce Clothing Store (MERN Stack)   *June 2024*
Full-stack responsive e-commerce app built using React, Node.js, and MongoDB.

- Developed dynamic product listings, filters, and cart system with React.
- Connected to Express backend and MongoDB for product management.

EXPERIENCE

Data Science Intern – 10Pearls, Karachi   *Present*
- Developing an end-to-end **AQI Prediction System** using Python, Scikit-learn, TensorFlow, and time-series models.
- Designing automated data pipelines with Airflow/GitHub Actions and model registry using Hopsworks.
- Creating Streamlit dashboards for real-time visualization of AQI trends and model outputs.

React Developer Intern – 10Pearls, Karachi   *Sep 2025 – Nov 2025*
- Developing a full-stack **Notes App** using the MERN stack with secure authentication and CRUD operations.
- Implementing structured logging (Pino), exception handling middleware, and unit tests using **Mocha** and **Jest**.
- Integrating code quality tools such as SonarQube and maintaining CI/CD workflows through Git and version control.

Open Source Contributor – GirlScript Summer of Code (Remote)   *Aug 2025 – Ongoing*
- Contributing to open-source projects in web development and data science domains.
- Collaborating with global developers through GitHub pull requests and issue resolutions.

Backend Developer Intern – Enumesol (Remote)   *Jul 2023 – Sep 2023*
- Developed REST APIs using Node.js and Express.js to manage backend logic.
- Designed and integrated MongoDB and SQL database schemas.
- Collaborated with frontend developers to deliver full-stack features.

CERTIFICATIONS

- Machine Learning Specialization – Coursera (Andrew Ng, DeepLearning.AI) *2025*
- Deep Learning Specialization – Coursera (DeepLearning.AI) *2025*
- Learn React – Codecademy *2024*
- Introduction to MongoDB – MongoDB *2024*

HONORS & AWARDS

Bright Student Merit Scholarship – Ranked 2nd nationwide; awarded among top 5 scorers. *Aug 2023*

Sindh Endowment Scholarship – Merit-based award for academic excellence. *Aug 2023*

Prime Minister Laptop Award – Awarded for highest CGPA in CS department. *Dec 2023*

LEADERSHIP ROLES

Executive – Computer Science Society, Sukkur IBA *Jan 2025*
Coordinated university-wide tech fest including logistics and team management.

Co-Lead – Women in Tech, MLSA Club *Apr 2023*
Led technical workshops and events promoting women in technology.

Finalist – Inter-University Coding Competition – Represented university in national-level problem-solving contest.

Test Executive – Sindh Educational Organization *2022–2025*
Conducted nationwide mock exams to support students' test preparation.