

Syed Muhammad Ammar

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EDUCATION

• NED University of Engineering and Technology

Bachelor of Engineering in Software Engineering

Nov 2021 – Jun 2025

karachi, Pakistan

PROFESSIONAL EXPERIENCE

• MatchMaker GME

Software Engineer

Apr 2024 – Present

New York, USA(Remote)

- Developed several full-stack web and mobile applications for education and academic evaluation.
- Implemented AI systems using LLMs for automated text analysis and content generation.
- Handled authentication, database design, and deployment of back-end and front-end services.
- Optimized database designs to cut data fetching costs by up to 25%.
- Automated processing of ~40k items by developing an ETL pipeline, structuring data and populating Db.
- Handled app publishing on Google and Apple stores, ensuring compliance with platform guidelines.
- Oversaw full product lifecycles while mentoring two developers and coordinating with stakeholders.

• MetaTalent.ai

Software Engineering Intern

Jan 2024 – Apr 2024

London, UK (Remote)

- Built ~20-screen admin panel with 3 custom dashboards, enabling full platform and user management.
- Developed several skill assessment features, implementing both front-end and back-end functionality.
- Designed RESTful APIs and optimized DB schemas for efficient data communication and management.

• Evincible Solutions

Software Engineering Intern

Aug 2023 – Sep 2023

Karachi, Pakistan

- Built an app and several interfaces using power apps and power pages, for smooth property assessments.
- Designed a chatbot for a hotel booking system using Power Virtual Agents, automating reservations.
- Automated business workflows and developed custom components, improving organizational efficiency.

ACHIEVEMENTS AND AWARDS

- **Code in Place'25 (Stanford University)** — Selected as Section Leader, taught programming to international students. [\[Link\]](#)
- **GreenCrop.ai (AgriSense)** — recognized among the **Best Projects of 2025** by the UNESCO Chair at NED University. [\[Link\]](#)
- Presented my work **GreenCrop.ai** at the **Climatech International Conference, Karachi, Pakistan (January 2025)**. [\[Slides\]](#)
- **1st Place, IBA HackFest 2025** — led the winning team in a Shark Tank–style innovation competition. [\[Link\]](#)
- **Runner-up, IEEE YESIST12 Regional Finals** — presented **GreenCrop.ai** among top university teams from across the state in a highly competitive innovation challenge. [\[Link\]](#)
- **Runner-up, CodeSphere'23** — among 100+ participants in a departmental programming contest. [\[Link\]](#)

SKILLS

- **Programming Languages:** Python, JavaScript, C++
- **AI & Machine Learning:** LangChain, RAG, Agentic AI, Tensorflow/PyTorch
- **Frameworks:** React, React Native, Next.js, Node.js, Express.js, NestJS, FastAPI
- **Database Systems:** PostgreSQL, MySQL, MongoDB, Firebase, VectorDB
- **Tools:** GitHub, Figma, Postman, UML, Latex

PROJECTS

• GreenCrop.ai(AgriSense): AI+IoT-Enabled Precision Farming Platform

- Technologies: *React Native, TensorFlow, LangChain, NestJS, FastAPI, PostgreSQL, LLMs, ESP32, Azure, Hugging face* 
- Developed ML models, including a disease detection module (92% acc), recommendation engine (95%).
 - Created a decision-support system using generative AI with RAG for localized, context-aware insights.
 - Architected an IoT device, integrating sensors, microcontrollers, and solar power for soil monitoring.
 - Integrated voice-based AI models to enhance accessibility, expanding usability to millions of farmers.
 - Designed 15+ screens, 12+ APIs, and deployed services across Azure and Render for smooth integration.
 - Led a 4-person team, managing the product lifecycle and marketing the product by pitching at 5+ events.

• ResearchRank: AI-Powered Student Ranking System

- Technologies: *ReactJs, JavaScript, LLMs, GitHub, Firebase, Vercel* 
- Built a ranking system using publication metrics, personal statement, and recommendations.
 - Integrated LLM for automated evaluation, with customizable scoring criteria and weightages.
 - Engineered authentication, db schemas, and report generation for streamlined data handling.

• ScrubHub: Medical Education App

- Technologies: *React Native, Firebase, Next.js, Netlify, Tailwind CSS, LLMs* 
- Developed/deployed cross-platform app with personalized learning, and social collaboration features.
 - Integrated LLMs to auto-generate 18,000+ questions and architected scalable db schemas.
 - Led product strategy and deployment, designing scalable data and UX systems.

• GoatLang: A Programming Language

- Technologies: *JavaScript, React, Node.js, Express.js, Babel, GitHub, Trello, Vercel* 
- Designed a compiler pipeline with lexical analysis, parsing, AST construction, and JS code generation.
 - Built a web-based IDE for coding, testing, and learning GoatLang with built-in documentation resource.
 - Created an Abstract Syntax Tree visualizer to illustrate how GoatLang programs are processed internally.
 - Applied data structures and object-oriented principles to design parsing and language components.

• Deep Research AI: Multi-Agent Research System

- Technologies: *Flask, Python, LlamaIndex, Groq, Tavily API, JavaScript, HTML, CSS* 
- Developed a multi-agent AI system to autonomously conduct topic-based research.
 - Implemented the pipeline for question generation, web-based information retrieval, and report synthesis.
 - Built a web interface with real-time progress tracking and markdown-formatted search outputs.

VOLUNTEER & LEADERSHIP

• CODE IN PLACE 2025, Stanford University

Apr 2025 – Jun 2025

Section Lead

- Instructed virtual classes for a cohort of 10–15 students in **CS106A: Introductory Python Programming**.

• Google Developer Group on Campus

Oct 2023 – Jun 2025

Partnership Team Lead

- Led a team to prepare proposals, establish partnerships, and organize tech events for 300+ students.

PUBLICATIONS

- [1] GreenCrop.ai: Smart Solution for Precision Farming, and Resource Efficiency
S. Zardari, **S. M. Ammar**, M. Osama, S. Sahil, H. Shahid, M. Ullah
SoftwareX, 2025 (*under revision*).

- [2] AI-Generated Code: Security Risks vs. Productivity Gains — A Systematic Review
S. Zardari, M. Osama, **S. M. Ammar**, A. Siddiqui, M. Gupta, A. Nanthaamornphong
Manuscript in preparation.

COURSES AND CERTIFICATIONS

- **Coursera(Meta)**: HTML and CSS in depth, React Basics & Advanced
- **Jawan Pakistan**: UI/UX Designing & Front-End Web Development
- **Frontend Masters**: Intro to Node.js, API Design in Node.js