# MUHAMMAD AMMAD

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## SOFTWARE ENGINEER

**Full-Stack Developer** with **4+ years** of experience building scalable, responsive, and secure web applications. Proficient in **Next.js, React, TypeScript, Python, and Flask**. Skilled in **RESTful API** development, **database integration**, and **system architecture**.

Experienced in **integrating AI-powered features** using **OpenAI APIs** and machine learning models to enhance user experience and automate workflows. Passionate about delivering modern, high-impact solutions by combining web technologies and AI.

## WORK EXPERIENCE

### FRONT-END DEVELOPER                    BROADPEAK TECHNOLOGIES
April 2025 - May 2025

- Joined Naranga to modernize its franchise platform, initiating migration from *monolith* to *microservices*.
- Built a modern UI using *React*, *Redux Toolkit*, and *Tailwind CSS*.
- Collaborated with DevOps and backend teams for seamless front-end *integration* with *RESTFul APIs*.
- Planned a full-scale rollout with UX improvements, but project was paused due to closure of the Lahore branch within a month.

### FRONT-END DEVELOPER                    ENERGY AND SECURITY GROUP (LLC)
November 2022 - March 2025

- Developed a *role-based CRM* portal utilising *React, Redux Toolkit, SCSS* and *Material UI* having features:
    - Digitized manual consumer services, *reducing process time from months to hours.*
    - Implemented paperless workflows, *helping cut national carbon emissions*.
    - Added an Activity Log to *track application stages, time spent, and staff KPIs.*
    - Integrated with legacy billing systems to *reduce errors and speed up processing.*
    - Built an E-File system with *barcode search* for one-click access to consumer records.
    - Developed a *real-time complaint tracking interface with Google Maps API and KMZ layers.*
    - Displayed live feeder statuses, transformer data, and geo-tagged complaints on an interactive map.
    - Created a *monitoring dashboard* to boost field team responsiveness.
    - Used *lazy loading, throttling, debouncing,* and *Redux Toolkit* for performance optimization.
    - Secured the app with *JWT auth, SQL injection protection, CAPTCHA,* and *rate limiting*.
    - Trained 300+ field staff to ensure successful portal adoption.
    - Created *comprehensive technical documentation* for the portal using *JSDoc, streamlining support and simplifying maintenance*.

### SOFTWARE ENGINEER                    POWER INFORMATION TECHNOLOGY COMPANY
March 2020 - October 2022

- Developed a Store Inventory System (SIS) with a secure *JWT-based REST API* (*Flask*) and responsive *Jinja2* frontend.
- Re-engineered IBS and Power ERP, creating *BPMN/UML* diagrams, *database dictionaries*, and *architecture documentation*.
- Performed CNIC *data analysis* using *SQL Server and Power Pivot in Excel.*
- Deployed self-hosted web solutions (Power Meetings, Power Chat, GitLab Server, Help Desk) on Ubuntu and CentOS.

## EDUCATIONAL HISTORY

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|---|---|
| **BACHELOR IN COMPUTER SCIENCE** | **GCU, LAHORE** |
| **3.08 CGPA** | October 2015 – December 2019 |
| **INTERMEDIATE (PRE-ENGINEERING)** | **GCU, LAHORE** |
| **77% Marks** | March 2012 – May 2014 |
| **MATRICULATION (SCIENCE)** | **GCMS, LAHORE** |
| **78% Marks** | January 2010 – February 2012 |

## TECHNICAL SKILLS

- **Front-End:** React, Redux, Tailwind, SCSS, Material UI, TypeScript, JavaScript
- **Back-End:** Next.js, Python, Flask, RESTful APIs, Web-Sockets
- **Databases:** PostgreSQL, SQL Server, Mongodb, Supabase
- **Web Security:** JWT Auth, Next-Auth, reCAPTCHA, API Rate Limiting
- **Tools & Platforms:** Github, Docker, Jira, Slack

## KEY PROJECTS

- **Crappo:** A responsive cryptocurrency website built with *Next.js, Redux Toolkit* and *Tailwind CSS* featuring a modern landing page, with user authentication using *Next-Auth*, newsletter subscription utilizing *MongoDB*, and smooth animations using *Framer Motion*.
- **SPM:** An indigenous, role based project management portal developed for a digital advertisement company utilizing *Flask, SQLAlchemy, Marshmallow* and *Postgresql* at the backend and *React, Tailwind CSS* and *Redux Toolkit* on front-end.
- **e-Operations:** The e-Operations web portal, a component of the Power Sector Improvement Activities (PSIA), served as a role-based interface for field operations developed using *React, Redux Toolkit, SCSS and Material UI.*
- **Kippax:** Developed a sleek, modern, and responsive website for a dynamic marketing agency. Built using *React, Tailwind CSS* and *Framer Motion* and *Loveable AI,* the site reflects the agency's creative brand with a bold, clean design and smooth user experience.
- **Codiniti:** An interactive website for a tech startup, showcasing company's profile in a visually appealing manner. Utilizing React, *Tailwind, Lattefiles* for animations and *Framer Motion* for smooth transitions, the website offered an engaging user experience.
- **Store Inventory System (SIS):** Web app built with *Flask, Python, JavaScript* and *Jinja2,* supporting full process of a standard inventory management business flow along with CRUD for items, categories, and suppliers, hierarchical stores.
- **Chatiniti:** A full-featured real-time chat application using *Flask, Flask-SocketIO,* and *PostgreSQL*. Chatiniti supports one-to-one and group chat, along with audio/video calls using WebRTC.
- **MEPCO Smart Web Portal:** Mepco Smart is a web portal developed as part of the Power Sector Improvement Activities (PSIA) using *React, SCSS* and *Material UI* for 33 million power consumers across Pakistan.

## CERTIFICATIONS

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|---|---|
| **Microsoft Certified - Azure Fundamentals** | **Microsoft** |
| **Artificial Intelligence & Computing (AIC)** | **PIAIC** |
| **Foundation of Project Management** | **Google - Coursera** |
| **Project Initiation - Starting a Successful Project** | **Google - Coursera** |
| **IBM Blockchain Essentials** | **IBM Developer Skills Network** |
| **IBM BLOCKCHAIN DEVELOPER** | **IBM Developer Skills Network** |
| **Overview of Datacenter Physical Infrastructure** | **Schneider Electric** |