

# MUHAMMAD SAIR

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## Skills

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**Frontend Development:** React.js, Next.js, TypeScript, Tailwind CSS, Material UI, HTML/CSS

**Backend Development:** Node.js, Express, FastAPI, MongoDB, PostgreSQL, Supabase, RESTful APIs

**Others:** Git, Github, AWS (ECS, S3, Redis), TensorFlow, Keras

## Experience

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### CBSOL

Sep 2025 - Present

Associate Software Engineer

Lahore, Pakistan

- Revamped [Klipz.ai](#), a full-stack AI-powered video clipping platform using React.js, FastAPI, and MongoDB Atlas that generates shareable social media clips from YouTube URLs and video uploads. Engineered AWS cloud infrastructure with CDK for ECS Fargate deployment, ElastiCache Redis for job queue management, and S3 for video storage.
- Implemented advanced AI transcription using AssemblyAI and OpenAI APIs with speaker diarization and content analysis. Built asynchronous background processing with Redis queue for handling video uploads and AI-based clip extraction at scale, and integrated OAuth 2.0 for TikTok and YouTube APIs.
- Built [Polariseco](#), an AI-powered proposal generation platform using Next.js, Node.js/Express, and MongoDB. Engineered intelligent document processing with PDF parsing and GPT-4 integration with custom prompt engineering, reducing proposal creation time from days to minutes.
- Developed [Square Your Circles](#), a gamified innovation challenge platform using Next.js, TypeScript, and MongoDB with real-time leaderboard system, carbon credit tracking, and Stripe payment integration for premium features.

### TKTurners

Sep 2024 – Jan 2025

Frontend Developer

Lahore, Pakistan (Hybrid)

- Developed two full-stack applications using Next.js and Strapi CMS: an Arabic Learning Management System ([Mudrsec](#)) and a rental platform (SparkHost). Implemented responsive UI components using Material UI, integrated RESTful APIs with PostgreSQL, and implemented i18n with RTL support for Arabic content.

## Projects

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[TerraMark](#) | Python, TensorFlow, Keras, Next.js, MongoDB, Google Earth Engine, OpenEO

Aug 2024 – Sep 2025

- Developing a geospatial intelligence system to resolve agricultural field boundary disputes in Pakistan using satellite imagery analysis. Training CNNs (ResNet50, ResNet101, SEResNet50V2) for semantic segmentation of agricultural parcels.
- Utilizing EuroCrops dataset, Google Earth Engine, and OpenEO platform for data preprocessing. Evaluating model performance using Jaccard Coefficient for spatial accuracy assessment.

[Swift Auto Transport](#) | Next.js, TypeScript, Material UI, Three.js, Resend

Jul 2025

- Delivered a complete production-ready website in 7 days for a U.S.-based auto transport brokerage. Built with Next.js for SSR, Material UI for responsive design, and Three.js for interactive effects. Integrated Resend for email communication and SEO-ready content.

[Laundry Orbit](#) | React.js, Node.js, Express, MongoDB, Material UI, JWT

Apr 2025 – Jul 2025

- Developed a full-stack laundry service platform with MVC architecture. Implemented secure JWT-based authentication and authorization across client and admin dashboards. Designed dynamic service ordering workflows with Material UI for responsive UI/UX.

[NutriQuest](#) | Flutter, Dart, Provider, RESTful APIs, Supabase

Jan 2024 – Mar 2024

- Built a Flutter-based mobile application for daily nutrition tracking and calorie management. Implemented food database integration via RESTful APIs with automatic calorie calculation, state management with Provider, and responsive UI for Android and iOS devices.

## Education

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COMSATS University Islamabad Lahore Campus

2021 – 2026

Bachelor of Computer Science

Lahore, Pakistan