

Muhammad Mahir
Linktree

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Software Engineer with 4.5 years of experience & strong foundation in Golang, AWS, SQL Databases, containerization & IAC (Terraform). In addition, 2 years of experience with Angular, JavaScript & TypeScript. Always eager to learn and currently exploring new horizons.

EXPERIENCE

- **NeoCharge** Remote
Senior Software Engineer *Jan 2025 – Present*
 - **Architect and maintain backend services:** Designed and maintained modular Go microservices following Domain-Driven Design (DDD) and clean architecture to power real-time EV charging operations and secure IoT communications.
 - **Establish secure device provisioning pipelines:** Built a Go-based certificate authority service to automate mutual TLS (mTLS) workflows, enabling secure onboarding, policy management and communication between EV smart splitters and the Mochi MQTT broker integrated with Redis-backed persistent sessions.
 - **Implement custom MQTT infrastructure:** Integrated Mochi MQTT broker (Go-native) with Redis for persistent device sessions, replacing Mosquitto and enhancing reliability, observability, and performance of device messaging.
 - **Build CI/CD pipelines and test environments:** Engineered GitHub Actions workflows to build, test, and deploy Dockerized services to AWS Elastic Beanstalk. Created realistic, TLS-enabled Redis testing environments using Docker Compose and 'testcontainers-go' for integration testing.
 - **Integrated and optimized third-party data services:** Integrated multiple external APIs to enhance smart charging: **ENODE** for energy provider integrations, **EVOX** for dynamic vehicle imagery, **LEAP** for demand response events, **RevenueCat** for subscription and entitlement management, **OPENEI** and **WattTime** for energy pricing and emissions data.
 - **Improve observability and fault tolerance:** Integrated multiservice Go deployments with Datadog for application monitoring, alerting, and log aggregation, ensuring high availability and quick incident response.
 - **Collaborate across firmware, product, and design:** Worked closely with cross-functional teams to ship production-ready features, resolve system edge cases, and align software behavior with hardware and user experience constraints.
- **Octopus Digital (Avanceon)** Lahore, Pakistan
Full Stack Developer *April 2023 – Dec 2024*
 - **Industrial IoT Platform (OmniConnect):** Built scalable modules for asset/tag hierarchy, real-time monitoring, and configuration management
 - * **Asset and Tag Management:** Designed intuitive workflows with dynamic search, pagination, import/export via Excel/CSV
 - * **Audit Logging & Monitoring:** Enabled complete activity logging and enhanced alarm systems with custom filters
 - **Fuel Management System (Fintech Feul):** Developed data-driven dashboards and UI modules for fleet efficiency, pump configuration, and plant settings
 - **Frontend Engineering:** Led development using Angular; implemented dynamic UI features based on configuration and user roles
- **Archtech Consultin** Remote Contract
Go Backend Developer *April 2021 – March 2023*
 - **Backend Architecture and Go Development:** Engineered modular, scalable applications using Go (Fiber, GORM, Echo), with a strong focus on maintainability, observability, and testability following Clean Architecture and SOLID principles.
 - **Event-Driven and Asynchronous Systems:** Designed message-driven workflows using Amazon MQ and custom queuing logic, supporting high-throughput event processing.
 - **Infrastructure as Code (IaC):** Provisioned cloud infrastructure using Terraform, automating deployments for AWS services including Lambda, EC2 and ECS
 - **Cloud-Native Application Delivery:** Deployed containerized Go services using AWS Elastic Beanstalk and Lambda, leveraging CI/CD with GitHub Actions
 - **Monitoring and Observability:** Integrated Prometheus & Grafana to track application performance, set up dashboards and alerts.

EDUCATION

FAST NUCES

Lahore

- *Bachelor of Science in Computer Science with a focus on programming languages and software development.*

CLIMATE TECH APPRENTICE

C2C LaunchPad — Remote

- **Climate Solutions Research:** Explored 7 climate tech sectors (CTVC) and 93 Project Drawdown solutions to identify high-impact technologies
- **Startup and Market Analysis:** Developed a project inspired by ClimateTechList, focusing on sector trends, business models, and innovation gaps.
- **Clean Energy and EV Charging Focus:** Gained insight into electrification, energy infrastructure, and EV charging ecosystem.
- **Technical and Communication Skills:** Strengthened climate market research, stakeholder engagement, and cross-sector collaboration.

TECHNICAL SKILLS

- **Backend:** Go (Fiber, GORM, Echo), REST APIs, Domain-Driven Design, Unit and integration testing, System reliability improvement, and Performance optimization
- **Database:** PostgreSQL, Amazon RDS, Redis, DynamoDB
- **DevOps and Cloud:** AWS (Lambda, Beanstalk, S3, RDS, MQ), Azure (App Service, Functions, VM, Logic Apps, Digital Twins), Terraform, Docker, GitHub Actions, Datadog, CloudWatch
- **Frontend:** TypeScript, JavaScript, Angular, HTML/CSS