

# Sahib Yar

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## Technical Skills

**Languages:** Go, Java, C++, Python, JavaScript/TypeScript, C#, Node.js

**Frontend:** Angular, HTML/CSS, JavaScript, TypeScript, Single Page Applications (SPA)

**Backend:** RESTful APIs, WebSockets, Microservices, gRPC, Protobuf, OAuth

**AI & LLM Integration:** Claude Code, GPT-4, Gemini 2.5, Windsurf IDE, Vector Embeddings, RAG Architecture

**Databases:** PostgreSQL, MongoDB, Redis, MySQL, Oracle

**Cloud & DevOps:** AWS (S3, SQS, EMR), Kubernetes, Docker, Linux, Shell Scripting

**Protocols & Standards:** HTTP/3, WebTransport, ISO-8583, EMV, SSL/TLS, FIX Protocol

## Key Achievements

- **Performance Optimization Expert:** Achieved up to 1500% performance improvements through system optimization, including 50% latency reduction in structured data parsing and 1000% throughput improvement via architectural changes
- **Large-Scale System Design:** Architected and built systems processing terabyte-scale datasets serving millions of users across distributed environments
- **Technical Leadership:** Led cross-functional teams of 5+ engineers, mentoring juniors on design patterns, code quality, and delivering mission-critical trading platforms
- **Full-Stack Development:** Built end-to-end solutions from high-performance backend services to modern frontend applications using Angular, Node.js, and JavaScript
- **Open Source Impact:** Active contributor to major projects including quic-go, go-libp2p, jtablesaw, and creator of innovative tools like MCPGen

## Summary

Lead Software Engineer with 8+ years of experience in full-stack development, distributed systems, and technical leadership. Expert in building scalable, high-performance applications using modern technologies including Go, Java, JavaScript/TypeScript, and cloud platforms. AI-first practitioner since 2022, leveraging LLMs to enhance productivity by 40% through intelligent code generation, documentation, and team collaboration. Proven track record of optimizing system performance, leading teams, and delivering user-centric solutions at scale.

## Experience

### Software Engineer, CentroidSol.com (Remote, Dubai)

Mar 2024 – Present

*Tech Stack: Golang, JavaScript/TypeScript, RESTful APIs, WebSockets, Protobuf, Redis, PostgreSQL, MongoDB, Docker, AWS, Linux, GPT APIs*

- **Full-Stack Development:** Built comprehensive trading platform with Go backend services and JavaScript frontend, handling real-time data processing for thousands of concurrent users
- **AI-Powered Alert System:** Transformed generic system alerts into personalized notifications using LLM integration, delivering contextual liquidation warnings via Slack and SMS, reducing customer losses by 35% through proactive risk management
- **Intelligent Customer Support:** Architected AI-powered chatbot converting Confluence documentation into vector embeddings stored in Redis VL, implementing sliding window context management and async request/response queues for real-time GPT-powered support via WebSockets
- **Performance Engineering:** Used pprof profiling to identify and resolve memory leaks, achieving 40% reduction in resource usage and improved stability under high-throughput conditions
- **Real-Time Systems:** Migrated data pipelines from HTTP to WebSockets, reducing latency by 60% and improving user experience for time-critical trading operations
- **Distributed Architecture:** Designed fault-tolerant microservices using Redis as cache/message broker, implementing distributed locks, rate limiting, and circuit breakers for 99.9% uptime
- **Security & Scale:** Implemented RBAC for APIs with secure privilege escalation, designed tiered throttling to prevent abuse, and optimized database queries reducing response times by 70%
- **Technical Leadership:** Led backend initiatives across global teams, conducted code reviews, mentored junior developers, and coordinated releases using GitOps practices

### Lead Software Engineer, Securiti.ai (Remote, Pakistan)

Nov 2021 – Dec 2024

*Tech Stack: Golang, Java, Python, JavaScript, JUnit5, Angular, RESTful APIs, AWS, Kubernetes, HashiCorp Vault, PostgreSQL, Redis*

- **Microservices Architecture:** Designed and developed scalable microservices for data privacy platform processing 10TB+ datasets daily, serving enterprise clients with strict SLA requirements

- **Enterprise Security Solutions:** Architected flexible secrets management system supporting AWS Secrets Manager, HashiCorp Vault, and Kubernetes native secrets, enabling seamless enterprise integration and improving security posture across multi-cloud deployments
- **Frontend Development:** Built responsive web interfaces using modern JavaScript frameworks, implementing real-time dashboards and data visualization components for compliance monitoring
- **Performance Optimization:** Replaced HTTP polling with WebSocket + Redis Streams architecture, achieving 50% latency improvement and better user experience in real-time data processing
- **Cloud Migration:** Led AWS SDK v2.x migration project, enhancing reliability and implementing secure API gateway patterns for S3, SQS, and EMR integrations
- **Testing Excellence:** Established comprehensive testing strategy with 5,000+ unit tests in Java/Go, achieving 85%+ code coverage and zero-downtime deployments through robust CI/CD pipelines
- **Technical Leadership:** Managed team of 5 engineers, conducted design reviews, implemented coding standards, and delivered multiple product milestones on schedule. Introduced AI-first development practices, training team on Claude Code, Windsurf IDE, and GPT-4 integration for enhanced productivity
- **AI-Driven Development Excellence:** Pioneered LLM-assisted development workflows using Claude Code for automated code generation, GPT-4 for intelligent refactoring, and Gemini 2.5 for comprehensive documentation creation, improving team velocity by 35%
- **Open Source Contributions:** Enhanced TableSaw library with advanced CSV parsing capabilities, contributing to the broader Java data processing ecosystem

### Senior Software Engineer, Afiniti (Hybrid, Pakistan)

Nov 2019 – Nov 2021

*Tech Stack: C++17, JavaScript, RESTful APIs, Kafka, PostgreSQL, MySQL, TCP/IP, SSL, WebSockets, Linux*

- **Real-Time Reporting System:** Architected microservice-based contact center monitoring platform processing 1M+ events/hour with sub-second latency requirements
- **System Architecture:** Replaced Kafka-based architecture with optimized file-based solution, achieving 1000% throughput improvement and 1500% faster query response times
- **Frontend Integration:** Developed JavaScript-based dashboards and real-time monitoring interfaces for call center operations, improving operator efficiency by 30%
- **Security Implementation:** Built SSL-based communication system supporting multiple CMS protocol versions, ensuring secure data exchange in enterprise environments
- **Performance Engineering:** Implemented high-performance TCP server with connection pooling and optimized SQL queries, supporting 10,000+ concurrent connections

### Implementation Engineer, Avanza Solutions (Oman, Somalia, Pakistan)

Nov 2017 – Nov 2019

*Tech Stack: Java Spring, .NET, JavaScript, RESTful APIs, SOAP, Oracle, PostgreSQL, ISO-8583, EMV*

- **Payment Systems Integration:** Designed secure middleware connecting banking platforms, ATMs, and third-party services, processing millions of transactions with 99.99% reliability
- **Frontend Development:** Built administrative interfaces and monitoring dashboards using JavaScript and modern web technologies for payment system management
- **International Deployments:** Led successful implementations across 3 countries, including MasterCard certification and EMV compliance for major banking institutions
- **Security Compliance:** Ensured PA-DSS compliance for multiple banks, implementing cryptographic standards and secure communication protocols

### Junior Software Engineer, InfoTech Group (Pakistan)

Nov 2016 – Nov 2017

*Tech Stack: C++, Node.js, Angular 2.0, JavaScript, TypeScript, .NET, RESTful APIs, OAuth, WebSockets*

- **Full-Stack Trading Platform:** Developed high-frequency trading application using Angular 2.0 frontend with Node.js backend, supporting thousands of concurrent users
- **Algorithm Optimization:** Reduced trade execution latency by 20% through efficient algorithm design and real-time data processing optimization
- **Frontend Migration:** Led migration from legacy Adobe Flash to modern Angular/JavaScript architecture, improving user experience and maintainability
- **API Development:** Built and consumed RESTful APIs with OAuth authentication, implementing secure client-server communication for trading operations

## Education

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Awards & Recognition

Certificate of Appreciation

2019

*Ivy-Alumni*

Awarded for exceptional work in developing next-generation AI solutions at Afiniti, a venture of Columbia and Ivy alumnus Zia Chishti. Recognized for outstanding contributions to backend data layer architecture and API development for AI-powered contact center optimization.

AI-First Development Practices

- **Code Generation & Optimization:** Leveraging Claude Code for automated boilerplate generation, complex algorithm implementation, and intelligent code suggestions, reducing development time by 50%
- **Intelligent Documentation:** Using Gemini 2.5 and GPT-4 for comprehensive API documentation, technical specifications, and code commenting, ensuring 95%+ documentation coverage across projects
- **Advanced Code Reviews:** Implementing AI-assisted PR reviews using LLMs for security vulnerability detection, performance optimization suggestions, and code quality improvements
- **Automated Refactoring:** Employing GPT-4 and Claude for legacy code modernization, design pattern implementation, and technical debt reduction across large codebases
- **Team Productivity Enhancement:** Training developers on Windsurf IDE integration, establishing AI-powered workflows for email communication, and implementing best practices for human-AI collaboration

Open Source Contributions & Projects

- **MCPGen** - Auto-generates multiservice MCP servers from OpenAPI v2/v3 specs. Parses Swagger and Arazzo files, integrates with LLMs for intelligent API coordination and workflow orchestration
- **go-i18n-db** - PostgreSQL-based internationalization library with nested JSON flattening, multi-tenant support, CRUD operations, bulk import/export, and CLI tooling
- **Enterprise SDK Optimization:** Contributed critical performance and security improvements to major Go libraries including Alpaca Trading API (4 merged PRs) and Fastly Go SDK (8 merged PRs), focusing on resource leak prevention, runtime optimization, and modern Go practices
- **Next-Gen Protocol Development:** Enhanced quic-go QUIC implementation and go-libp2p peer-to-peer networking, contributing to cutting-edge HTTP/3 and WebTransport protocols that power modern web infrastructure
- **Data Processing Innovation:** Improved TableSaw Java library with advanced CSV parsing capabilities, enhancing data science workflows for enterprise analytics platforms
- **Technical Content Creator:** Developed educational YouTube content on software development, reaching global developer community with practical programming tutorials and best practices
- **Community Impact:** 15+ merged pull requests across high-impact projects, specializing in performance optimization, memory management, security hardening, and developer experience improvements