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About myself

With over five years of experience in full-stack development, I've built a career centered on delivering reliable, scalable, and high-performing systems across a diverse range of domains. My foundation lies in modern web technologies, backend architecture, cloud infrastructure, and database design—but over the years, I've expanded that into leading the development of intelligent, AI-powered platforms that solve real business problems.

I've worked across the full software lifecycle—designing architectures from the ground up, writing production-grade code, leading feature development, and deploying applications that serve thousands of users with stability and speed. My recent focus has been on integrating advanced AI models into enterprise systems: building intelligent automation workflows, working with vector databases, and deploying language model agents that personalize user experiences and improve operational efficiency.

What sets me apart is my ability to combine strong technical depth with a strategic mindset. I don't just write clean code—I design systems that are resilient, scalable, and aligned with long-term goals. I stay hands-on with new technologies, but always filter them through a lens of practical value. Whether it's building AI systems, designing microservices, or improving system performance, I approach each challenge with curiosity, precision, and a strong focus on outcomes.

Technical Competencies

Programming Languages: Python, JavaScript (ES6+), C#, PHP, SQL

Frontend Technologies: React.js, Next.js, Vue.js, Redux, Context API, React Query, Material UI, Bootstrap, Tailwind CSS, HTML, CSS/SCSS, Gsap, Lottie, jQuery, Vite, Webpack, WebRTC

Backend & Frameworks: FastAPI, Node.js, Symfony, ASP.NET/.NET Core, API Platform, MVC Architecture, JWT, OAuth, Okta SSO, Bcrypt, 2FA, Redis, Celery, Socket.io / SocketCluster, WebSocket, RESTful APIs, Bugsnag, Webhooks, OpenAPI / Swagger

AI/ML Technologies: LangChain Framework, OpenAI GPT, Anthropic Claude, Perplexity AI, Groq, Meta LLaMA, Google Gemma, OpenAI Whisper, RAG (Retrieval-Augmented Generation), Vector Embeddings, OpenAI Assistants API, Scrapy

Databases: PostgreSQL (pgvector), MySQL, MongoDB, Milvus, Pinecone, Weaviate, SQLAlchemy ORM, Dapper ORM, Entity Framework

DevOps & Deployment: Docker, GitHub Actions CI/CD, Uvicorn ASGI, Alembic, Render.com, Heroku, ngrok, Vercel, Jenkins

Cloud Services & APIs: AWS (S3, Chime, SQS), Supabase, Stripe, Moyasar, Twilio (SMS/WhatsApp API), SendGrid, Mailjet, Cronofy API, YouSign API, Clearbit API, Chargebee, Mailjet

Career Overview

Full-Stack Developer | WorkHub, Lahore

Key Responsibilities & Achievements:

- **Architected and developed WorkBot**, an enterprise-grade AI-powered knowledge management platform transforming organizational documents into intelligent chatbots using RAG technology
- **Led full-stack development** of a comprehensive AI assistant ecosystem serving enterprise companies with multi-modal document processing capabilities
- **Built Dubai Real Estate Platform (DREP)**, a comprehensive AI-powered real estate management system serving Dubai's property market with intelligent automation
- **Developed MemoMind**, an intelligent WhatsApp-based personal memory assistant leveraging AI for seamless information storage and retrieval through natural conversation
- **Created Competitor Search API**, a sophisticated AI-powered competitor analysis platform delivering comprehensive market intelligence and strategic insights for businesses
- **Implemented sophisticated multi-model AI integration** supporting OpenAI GPT, Anthropic Claude, Perplexity AI, and Groq with dynamic model selection and cost optimization
- **Built a scalable microservices architecture** using FastAPI and Python, handling concurrent processing of thousands of documents with 99.9% uptime
- **Designed vector database systems** using Milvus and PostgreSQL with pgvector for semantic search and intelligent document retrieval with sub-second query response times
- **Developed a comprehensive DevOps pipeline** with Docker containerization, GitHub Actions CI/CD, and multi-environment deployment on Render.com
- **Maintained and enhanced legacy applications** from the Coeus Solutions acquisition, migrating Connect and Scheduling apps to a modern React/Material-UI stack
- **Optimized performance and costs** through intelligent caching and query optimization strategies

Technical Stack:

- **Backend:** FastAPI, Python, PHP Symfony, SQLAlchemy ORM, PostgreSQL (with pgvector), MySQL
- **AI/ML:** LangChain Framework, OpenAI GPT, Anthropic Claude, Perplexity AI, Groq, RAG Architecture, Vector Embeddings
- **Vector Databases:** Milvus, PostgreSQL pgvector for semantic search and embeddings
- **Document Processing:** PyMuPDF, PyPDF2, pdf2image, Tesseract OCR (English, Arabic, German), python-magic, OpenAI Whisper, BeautifulSoup
- **Frontend:** React.js, Material-UI, Redux, Socket Cluster, WebSocket
- **Caching & Queues:** Redis (multi-layer caching), Celery (background processing)
- **Cloud Services:** AWS S3 (boto3), Supabase, Render.com deployment, Heroku, Stripe payment processing
- **Communication:** SendGrid, Mailjet, SMTP, WebSocket, real-time messaging, Twilio, WhatsApp API
- **DevOps:** Docker, GitHub Actions CI/CD, Bugsnag monitoring, Alembic migrations, Uvicorn ASGI

Notable Projects:

WorkBot - Enterprise AI Knowledge Management Platform

- **Scope:** Full-stack development of RAG-powered AI system converting static documents into interactive chatbots
- **Key Features Developed:**
 - **Multi-Model AI Integration:** Dynamic switching between OpenAI GPT, Anthropic Claude, and Groq models based on query complexity and cost optimization
 - **Advanced RAG System:** Custom retrieval-augmented generation providing factual, source-backed answers from company knowledge bases
 - **Multi-Modal Document Processing:** Support for PDFs, Excel files, images, and scanned documents with OCR capabilities in multiple languages
 - **Vector Database Implementation:** Milvus integration handling millions of document embeddings with semantic search capabilities
 - **Context-Aware Chatbot:** Advanced conversation management with chat history, threading, and context preservation
 - **Voice & Web Agents:** AI-powered voice interaction system with feedback collection and web-based assistant deployment

- **Source Citation System:** Automated source tracking and citation for answer transparency and verification
- **Real-time Streaming:** Response streaming implementation for enhanced user experience and reduced latency
- **Technical Achievements:**
 - Built multi-tenant architecture with complete data isolation between companies
 - Implemented JWT-based authentication with role-based access control
 - Created a sophisticated multi-layer Redis caching strategy, significantly reducing API costs
 - Developed scalable background processing with Celery and Redis message broker
 - Achieved high query accuracy with fast response times
- **Impact:** Enabled instant access to company knowledge bases, significantly reducing research time and handling thousands of daily queries

Dubai Real Estate Platform (DREP) - AI-Powered Property Management System

- **Scope:** End-to-end development of a comprehensive real estate management platform serving Dubai's property market with intelligent automation and AI integration
- **Key Features Developed:**
 - **AI-Powered Property Management:** Intelligent property categorization, automated description generation, and semantic search using OpenAI embeddings with PostgreSQL pgvector
 - **Advanced Lead Management System:** Multi-source lead capture with automated scoring, qualification, and intelligent assignment to brokers with improved conversion rates
 - **AI-Driven PDF Processing:** Anthropic Claude integration for automated project creation from property brochures, significantly reducing manual data entry
 - **Real-time Communication Hub:** WebSocket-based messaging system with AI chatbot for property inquiries and lead qualification
 - **Multi-Tier Role Management:** Six-level user hierarchy (Super Admin to User) with commission-based categorization and team management
 - **Financial Management Suite:** Automated commission calculation, multi-currency payment processing, invoice generation, and audit trail
 - **Vector-Based Property Matching:** Semantic similarity search for intelligent property recommendations using embeddings and vector operations
 - **Contract & LOI System:** Digital Letter of Intent processing, automated contract generation, and document lifecycle management
 - **Marketing Campaign Automation:** Email campaign management with SendGrid/Mailjet integration and performance analytics
- **Technical Achievements:**
 - Implemented FastAPI with async SQLAlchemy for high-performance database operations
 - Built a scalable file processing system with AWS S3 integration and signed URLs for secure media access
 - Created a comprehensive RBAC system with JWT authentication and bcrypt password security
 - Developed AI-powered duplicate detection and contact preference management
 - Integrated multiple email service providers with fallback mechanisms for reliable communication
 - Built a real-time analytics dashboard with property view tracking and user activity monitoring
- **Impact:** Streamlined Dubai real estate operations, substantially reduced manual processing, improved lead conversion rates, and enabled efficient real-time property discovery for users

Competitor Search - AI-Powered Market Intelligence Platform

- **Scope:** Full-stack development of sophisticated competitor analysis and market intelligence REST API platform leveraging AI for comprehensive business insights
- **Key Features Developed:**
 - **AI-Powered Competitor Discovery:** Perplexity API integration for intelligent competitor identification and comprehensive market analysis
 - **Multi-Dimensional Analysis Engine:** Advanced analytics including SWOT analysis, market positioning, sentiment analysis, and pricing strategy evaluation
 - **Strategic Intelligence Tools:** AI-generated sales pitch creation, competitor monitoring systems, and strategic roadmap planning capabilities

- **Token-Based Usage System:** Comprehensive credit management with Stripe payment integration and flexible pricing tiers for different analysis types
- **Comprehensive Database Architecture:** PostgreSQL with SQLAlchemy ORM managing users, competitors, products, analyses, and subscription data
- **Authentication & Security:** JWT-based token authentication with email verification, password reset, and role-based access control
- **Web Scraping Integration:** BeautifulSoup implementation for website analysis and competitor data extraction
- **Historical Analytics:** Analysis tracking system enabling longitudinal competitive intelligence and trend monitoring
- **Demo Request System:** Enterprise-grade demo management with diamond currency for premium features
- **Custom Question Analysis:** Natural language query system allowing users to ask specific questions about competitors
- **Technical Achievements:**
 - Built a scalable FastAPI architecture with async capabilities, handling concurrent analysis requests
 - Implemented a comprehensive audit trail system tracking all user actions and token transactions
 - Created a sophisticated pricing model with different token costs per analysis type (30 tokens for search, 20 for monitoring, 10 for custom questions)
 - Developed secure payment processing with Stripe webhooks for automatic token allocation
 - Integrated multiple email service providers (Mailjet) for transactional communications
 - Built comprehensive API documentation with OpenAPI/Swagger and ReDoc
 - Implemented database migrations with Alembic for schema versioning and updates
 - Created a structured logging system for monitoring and debugging across application layers
- **Impact:** Transformed competitive intelligence workflows for businesses, enabling automated competitor discovery and analysis in minutes rather than days, serving startups, product managers, and sales teams with actionable market insights

MemoMind - WhatsApp Personal Memory Assistant

- **Scope:** End-to-end development of an intelligent WhatsApp-based personal knowledge management system transforming natural conversation into semantic memory storage and retrieval
- **Key Features Developed:**
 - **AI-Powered Message Classification:** Intelligent determination of storage vs. query intents using OpenAI GPT models with multi-step analysis and context consideration
 - **Semantic Memory System:** Advanced vector storage using the Milvus database with OpenAI embeddings for meaning-based information retrieval
 - **WhatsApp Integration:** Complete Twilio API integration for a native messaging experience with webhook handling and message delivery tracking
 - **Voice Processing Capabilities:** OpenAI Whisper integration for voice message transcription and natural speech-to-text conversion
 - **Context-Aware Conversations:** Intelligent conversation history management with follow-up question handling and contextual response generation
 - **Subscription Management System:** Comprehensive Stripe integration with trial periods, recurring billing, and subscription lifecycle management
 - **User Data Isolation:** Partition-based vector database architecture ensuring complete privacy and data separation between users
 - **Smart Response Generation:** AI-powered summarization with conversation context and automatic message chunking for WhatsApp limits
 - **Caching Strategy:** Redis-based performance optimization with configurable expiry and efficient data retrieval
- **Technical Achievements:**
 - Implemented sophisticated prompt engineering for accurate intent classification and contextual response generation
 - Built scalable vector database architecture with IVF_FLAT indexing and L2 distance similarity search
 - Created a comprehensive webhook validation system with cryptographic signature verification for security
 - Developed an asynchronous processing pipeline handling concurrent message processing and AI model interactions

- Integrated multiple OpenAI models (GPT-4o-mini, GPT-o1, Whisper-1) with intelligent model selection based on task requirements
- Built a robust subscription system with Stripe webhooks, managing trial periods, billing cycles, and access control
- Implemented repository pattern with Supabase integration for scalable data management and user lifecycle tracking
- **Impact:** Transformed personal information management by enabling natural conversation-based knowledge storage, eliminating information silos, and providing instant semantic search capabilities for users

API Edrak - Legal AI Research Platform

- **Scope:** Full-stack development of a specialized AI-powered legal research and advisory platform for legal professionals
- **Key Features Developed:**
 - **Multi-Model Legal AI Integration:** Comprehensive LLM support including GPT-4o, GPT-4, O1-preview, Claude 3 Opus, Meta LLaMA 3, and Google Gemma2 for legal analysis
 - **Court Verdict Analysis Engine:** Specialized processing of judicial decisions, court verdicts, and legal case files with automated precedent extraction
 - **Legal Document Intelligence:** Advanced document processing for PDFs, HTML legal texts, and scanned court papers using OCR and specialized legal content extraction
 - **OpenAI Assistants API Integration:** Thread-based conversation management for persistent legal consultations and complex case analysis
 - **Legal Web Crawling System:** Scrapy-based recursive crawling of legal databases, court websites, and case law repositories with domain-restricted access
 - **Semantic Legal Search:** A Vector embedding system for intelligent legal document search and precedent discovery
 - **Legal Research Automation:** Natural language query system against legal document repositories with source attribution
 - **Subscription & Billing System:** Moyasar payment integration with token-based usage tracking and flexible subscription tiers for law firms
 - **Legal Document Classification:** Automated categorization and metadata extraction for legal content types
- **Technical Achievements:**
 - Implemented a specialized legal document processing pipeline with intelligent text extraction optimized for legal terminology
 - Built a duplicate prevention system using SHA256 hashing for legal content processing
 - Created secure file management with encrypted storage and signed URL generation for sensitive legal documents
 - Developed a comprehensive audit trail system for legal document access and modifications
 - Integrated multiple AI models with custom prompt engineering specifically tuned for legal analysis
- **Impact:** Transformed legal research workflows, enabling instant access to case law and precedents, significantly reducing legal research time for law firms

Legacy Application Modernization - Connect & Scheduling

- **Scope:** Complete UI migration and feature enhancement of the existing WorkHub ecosystem applications
- **Key Features Enhanced:**
 - **WorkHub Connect:** Maintained AWS Chime integration, Socket Cluster messaging, user management, and S3 media storage
 - **WorkHub Scheduling:** Preserved Cronofy API integration, multi-calendar sync, and meeting management functionality
 - **Modern UI Implementation:** Complete redesign using React, Material-UI, following Figma specifications
 - **Responsive Design:** Mobile-first approach with improved accessibility and cross-device compatibility
 - **Performance Optimization:** Substantially faster load times through code splitting and efficient state management

- **Technical Achievements:**
 - Seamless migration from legacy framework to modern React stack
 - Maintained all existing integrations (AWS services, third-party APIs, Socket Cluster)
 - Improved code maintainability and development velocity
 - Enhanced user experience with modern design patterns
- **Impact:** Significantly improved user adoption and reduced customer support tickets

DevOps & Infrastructure Achievements:

- **Containerization:** Docker multi-stage builds with optimized image sizes and security scanning
- **CI/CD Pipeline:** GitHub Actions automation with automated testing, security checks, and multi-environment deployment
- **Cloud Architecture:** Multi-instance deployment with load balancing and auto-scaling on Render.com
- **Monitoring & Reliability:** Integrated Bugsnag error tracking, health monitoring, and automated alerting systems
- **Database Management:** PostgreSQL optimization with connection pooling, pgvector extensions, and Alembic schema versioning
- **Security Implementation:** CORS protection, encrypted database connections, secure API key management, and JWT-based authentication

AI/ML Technical Challenges Overcome:

- **RAG Optimization:** Fine-tuned retrieval accuracy balancing relevance and computational efficiency across multiple platforms
- **Multi-Language Processing:** Implemented OCR with Tesseract, supporting English, Arabic, and German documents
- **Cost Management:** Developed an intelligent model selection, reducing AI processing costs while maintaining quality
- **Scalability:** Built distributed processing systems handling concurrent document ingestion and query processing
- **Data Privacy:** Ensured complete tenant isolation and secure handling of sensitive enterprise and legal documents
- **Vector Search Optimization:** Implemented efficient similarity search algorithms with pgvector and Milvus for sub-second response times
- **Market Intelligence Processing:** Developed sophisticated competitor analysis algorithms using Perplexity API for real-time market insights

Professional Growth:

- **AI/ML Expertise:** Mastered modern AI application development with LangChain, vector databases, and multi-model integration
- **Technical Leadership:** Led architecture decisions and mentored team members on AI integration best practices
- **DevOps Proficiency:** Advanced skills in containerization, CI/CD, and cloud deployment strategies
- **Enterprise Development:** Experience building scalable, multi-tenant SaaS platforms for enterprise clients and specialized industries
- **Innovation Leadership:** Pioneered AI adoption within the company, establishing standards for RAG implementations and semantic search systems
- **Full-Stack Mastery:** Comprehensive expertise in modern web technologies, from FastAPI backends to React frontends with real-time capabilities
- **Business Intelligence:** Developed expertise in competitive analysis, market intelligence, and strategic planning through AI-powered platforms

FullStack Developer | Coeus Solutions, Lahore

February 2022 - July 2022

Key Responsibilities & Achievements:

- **Developed enterprise-grade communication platform** (WorkHub) serving multiple business clients with scalable React.js frontend and PHP Symfony backend
- **Implemented AWS Chime integration** for high-quality voice/video calling with call recording capabilities, supporting both one-to-one and group calls
- **Built a comprehensive user management system** with real-time activity tracking, online/offline status monitoring, and availability indicators
- **Architected real-time messaging infrastructure** using Socket Cluster for instant messaging, group channels, and live user presence tracking
- **Integrated multiple AWS services**, including S3 for media storage, SQS for queue management, and Chime for communication features
- **Developed a secure document signing workflow** using the YouSign API for digital document execution and sharing
- **Implemented enterprise authentication system** with Okta integration, OTP verification via Twilio, and multi-app SSO functionality
- **Optimized application performance** using Redis caching and efficient database queries with MySQL

Technical Stack:

- **Frontend:** React.js, JavaScript (ES6+), HTML5, CSS3, Redux
- **Backend:** PHP Symfony, MySQL, Redis
- **AWS Services:** Chime (calling), S3 (storage), SQS (queues)
- **Real-time:** Socket Cluster for messaging and presence
- **Integrations:** Okta (SSO), Twilio (OTP), YouSign (documents), Clearbit (domain verification), Chargebee (billing)

Notable Projects:

WorkHub Connect - Enterprise Communication Platform

- **Scope:** Full-stack development of a comprehensive business communication solution
- **Key Features Developed:**
 - **AWS Chime Integration:** Implemented voice/video calling with call recording, supporting one-to-one and group calls with up to 50+ participants
 - **Call Management System:** Built a call logs dashboard with detailed analytics, duration tracking, and recording playback functionality
 - **User Activity Dashboard:** Real-time monitoring showing online/offline status, in-call indicators, and availability settings for enhanced team visibility
 - **Real-time Messaging:** Socket Cluster-powered chat system with direct messaging and group channels, file sharing, and message history
 - **Media Management:** S3-integrated media library allowing users to upload, share, and organize files with proper access controls
 - **Digital Document Signing:** YouSign API integration enables secure document execution and sharing workflows
 - **User Presence Tracking:** Live status updates and activity indicators for improved team coordination
- **Technical Achievements:**
 - Handled concurrent users across multiple communication channels
 - Optimized real-time data synchronization with minimal latency
 - Built a responsive UI handling complex state management for calls and messaging
- **Impact:** Enabled seamless remote collaboration with enterprise-grade security and reliability

WorkHub Admin - Multi-tenant Management Platform

- **Scope:** Development of a centralized administration system serving as the parent application for the entire WorkHub ecosystem
- **Key Features Developed:**
 - **Enterprise Onboarding System:** Complete user registration workflow with email verification and OTP-based authentication via Twilio
 - **Okta SSO Integration:** Social login implementation supporting multiple identity providers with seamless single sign-on across all WorkHub applications
 - **SQS Queue Management:** Automated user provisioning system using AWS SQS for reliable cross-application user creation and synchronization
 - **Company Management Portal:** Multi-tenant architecture supporting company creation, domain verification via Clearbit API, and custom branding
 - **User & Company Administration:** Comprehensive dashboard for managing users, permissions, company settings, and access controls
 - **Billing Integration:** Chargebee integration for subscription management, billing, and payment processing
 - **Domain Management:** Custom domain setup and verification system for white-label deployments
- **Technical Achievements:**
 - Built a scalable multi-tenant architecture supporting hundreds of companies
 - Implemented secure authentication flow with multiple verification methods
 - Created an efficient queue-based system for cross-application data synchronization
- **Impact:** Streamlined enterprise onboarding and reduced setup time

WorkHub Scheduling - Multi-Calendar Management System

- **Scope:** Development of an intelligent meeting scheduling and calendar synchronization platform
- **Key Features Developed:**
 - **Multi-Calendar Integration:** Seamless synchronization with multiple calendar providers (Google Calendar, Outlook, Exchange) via the Cronofy API
 - **Smart Meeting Scheduling:** Intelligent conflict detection and resolution with automated meeting booking across different time zones
 - **Interactive Calendar UI:** Responsive calendar interface with drag-and-drop functionality for easy meeting management
 - **Automated Notifications:** Meeting reminders and updates sent via integrated notification system
 - **Agenda Management:** Comprehensive agenda viewer with meeting details, participant lists, and document attachments
 - **Time Zone Handling:** Global time zone support for distributed teams with automatic conversion
 - **Meeting Analytics:** Detailed reporting on meeting patterns, duration, and participant engagement
- **Technical Achievements:**
 - Complex API integration handling multiple calendar providers with different data formats
 - Real-time calendar synchronization ensures data consistency across platforms
 - Advanced date/time manipulation algorithms for conflict resolution
 - Efficient caching strategy using Redis for improved performance
- **Impact:** Eliminated back-and-forth email coordination for meeting setup

Technical Challenges Overcome:

- **Real-time Scalability:** Optimized Socket Cluster implementation to handle thousands of concurrent connections
- **AWS Integration:** Successfully integrated multiple AWS services, ensuring reliable communication and media handling

- **Multi-tenant Architecture:** Built secure, isolated environments for different companies within a single platform
- **Cross-platform Authentication:** Implemented seamless SSO across multiple applications with various identity providers

Professional Growth:

- **Mastered enterprise-grade integrations** with AWS, Okta, and third-party services
- **Gained expertise in real-time communication systems** and WebRTC technologies
- **Enhanced skills in multi-tenant SaaS architecture** and scalable system design
- **Developed proficiency in queue-based systems** and asynchronous processing
- **Strengthened API integration abilities** working with complex enterprise services

Full-Stack Developer | Bravinn Technologies, Lahore

August 2020 - January 2022

Key Responsibilities & Achievements:

- **Architected and developed multiple cloud-based applications** serving creative professionals, utilizing JavaScript, ASP.NET Framework, Entity Framework, Node.js, and MSSQL
- **Led full-stack development** of Animatricks, a comprehensive animation and video creation platform enabling users to create promotional content with custom scenes, audio integration, and multi-format video export capabilities
- **Built a scalable graphic design application** (Logo Builder) with advanced shape manipulation, custom uploads, and real-time design tools, supporting hundreds of concurrent users
- **Developed a comprehensive school management system** (Academinator) featuring a multi-module architecture, including attendance tracking, curriculum management, testing system, and administrative controls
- **Implemented robust security frameworks**, including JWT authentication, role-based authorization, and secure API endpoints across all applications
- **Optimized database performance** through custom stored procedures and efficient query design, reducing load times by 40%
- **Engineered complex file processing systems** for handling large JSON files and Lottie animations using JavaScript and React.js
- **Maintained and enhanced legacy systems** while troubleshooting critical issues and implementing new features based on user feedback
- **Collaborated with cross-functional teams** to deliver projects on schedule and within technical specifications

Technical Stack:

- **Frontend:** JavaScript (ES6), React.js, HTML5, CSS3, Redux, Context API
- **Backend:** ASP.NET Framework, ASP.NET Core, Node.js, RESTful APIs
- **Database:** MSSQL, Entity Framework, Dapper ORM, Stored Procedures
- **Authentication:** JWT Tokenization, Role-based Access Control

Notable Projects:

Animatricks - Animation & Video Creation Platform

- **Scope:** Full-stack development of cloud-based video creation software

- **Features:** Multi-scene animation, custom shape/image integration, audio/video clip management, real-time preview, and multi-FPS video export
- **Impact:** Enabled non-technical users to create professional-quality promotional videos
- **Technologies:** React.js, ASP.NET Core, Dapper, Node.js, MSSQL

Logo Builder App - Graphic Design Tool

- **Scope:** Cloud-based logo creation platform with advanced design capabilities
- **Features:** Custom shape library, text manipulation, user uploads, real-time editing, export functionality
- **Impact:** Streamlined logo creation process for small businesses and freelancers
- **Technologies:** JavaScript, ASP.NET Framework, Entity Framework, MSSQL

Academinator - School Management System

- **Scope:** Comprehensive educational platform with multiple integrated modules
- **Features:** Attendance management, lecture uploads, testing system, curriculum tracking, teacher administration
- **Impact:** Digitized school operations and improved administrative efficiency
- **Technologies:** ASP.NET Framework, Entity Framework, JavaScript, MSSQL

MockUp App - Design Mockup Tool

- **Scope:** Cloud-based application for creating product mockups
- **Features:** Template library, customization tools, export options
- **Technologies:** JavaScript, ASP.NET Framework, Entity Framework

Personal and Freelance Projects

Kamlink - Healthcare Management Platform

Scope: Full-stack development of a comprehensive healthcare management platform serving healthcare organizations, hospitals, and medical facilities with centralized operations management

Key Features Developed:

- **Multi-Tenant Healthcare Architecture:** Built a scalable organization and facility management system with a hierarchical structure supporting multiple healthcare facilities under a single organization
- **Role-Based Access Control (RBAC):** Implemented a comprehensive permission system with a four-tier user hierarchy (CEO, Corporate, Manager, Facility Users) with granular access controls
- **Medical Staff Management System:** Developed complete doctor and physician management with specialization tracking, staff activity monitoring, and time tracking capabilities
- **Patient Care Coordination:** Built a comprehensive patient intake, discharge planning, census tracking, and AMA (Against Medical Advice) management system
- **Real-time Communication Hub:** Socket.IO integration for live user presence tracking, instant notifications, and organization-scoped messaging
- **Financial Management Suite:** Comprehensive expense tracking with attendee management, mileage calculation, budget allocation, and insurance contract management
- **Hospital Network Integration:** Partner hospital management with key contact tracking and inter-facility business coordination capabilities
- **Contract & Compliance System:** Automated contract management, admission criteria tracking, and PAR (Physician Assessment and Review) quality assurance

- Support Ticket System: Internal helpdesk functionality with ticket lifecycle management and resolution tracking

Technical Achievements:

- Built robust Node.js/Express.js backend with PostgreSQL and Sequelize ORM, handling complex healthcare data relationships
- Implemented JWT-based authentication with 2FA support using Speakeasy and comprehensive session management
- Created sophisticated API architecture with pagination, filtering, sorting, and field selection optimization
- Integrated Google Cloud Storage for secure medical document and media management
- Developed a comprehensive audit trail system for regulatory compliance and activity tracking
- Built WebSocket infrastructure supporting real-time updates across multiple healthcare facilities
- Integrated Stripe payment processing for subscription management and financial transactions

Impact: Unified fragmented healthcare operations into a single platform, eliminated manual paper-based workflows, improved real-time coordination between medical facilities, and ensured regulatory compliance for healthcare organizations

Technologies: Node.js, Express.js, PostgreSQL, Sequelize ORM, Socket.IO, Passport.js, JWT, Google Cloud Storage, Stripe, Docker, Swagger/OpenAPI

Screen Recording Chrome Extension

- **Technologies:** JavaScript, Chrome Extension APIs, WebRTC
- **Features:** Multi-source recording capabilities (screen, microphone, camera), real-time media processing, and user-friendly interface
- **Impact:** Streamlined content creation workflow with seamless recording functionality

Car Booking Management Platform

- **Technologies:** Full-stack web application with responsive dashboard
- **Features:** Multi-category vehicle selection, dynamic pricing system, advanced filtering options, dual-interface design (admin/user), booking management system
- **Impact:** Comprehensive solution for automotive rental services with role-based access control

Property Management & Auction System

- **Technologies:** Full-stack web application with real-time capabilities
- **Features:** Property listing management, auction functionality, category-based filtering, price range selection, dual-role interface (admin/user), bidding system
- **Impact:** Complete real estate management solution with automated auction processes

Additional Development Initiatives

- **Prototype Applications:** Multiple proof-of-concept projects exploring emerging technologies and innovative user interfaces
- **Open Source Contributions:** Active participation in the developer community through code contributions and technical discussions
- **Continuous Learning Projects:** Regular development of small-scale applications to experiment with new frameworks and technologies

Personal Skills

- Research & Development
- Highly organized and efficient
- Ability to work independently or as part of a team
- Able to work under pressure.
- Problem-solving and fast Learning.

Education

2019: University of Gujrat, Lahore Campus, Pakistan; BSCS (HONS)