

■ FREEZY PLATFORM

Complete Job & Learning Resource Platform Technical Documentation & Business Guide

■ Feature	■ Details
Automated Scraping	Daily fresh content pipeline
Tiered Business Model	Free, Pro (200 PKR), Enterprise (400 PKR)
Payment Integration	JazzCash + WhatsApp verification
Admin Panel	Complete platform management
GitHub Actions	Automated CI/CD workflow
Firebase Backend	Scalable cloud infrastructure

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■ EXECUTIVE SUMMARY

Freezy Platform is a comprehensive job and learning resource platform designed for the Pakistani market with global reach. The platform combines automated content scraping, intelligent resource distribution, and a tiered subscription model to create a sustainable business serving job seekers and learners.

Key Achievements:

- 88+ resources with daily automated updates
- Tiered subscription model (Free/Pro/Enterprise)
- JazzCash payment integration with WhatsApp verification
- Complete admin panel for platform management
- GitHub Actions automation for zero-maintenance operation
- Modern tech stack: Next.js + Firebase + Python

■ BUSINESS MODEL

Plan	Price (PKR)	Resources	Key Features
Free	0	38	Basic jobs, courses, tools
Pro	200	200	Premium content, remote jobs, priority support
Enterprise	400	Unlimited	All resources, exclusive content, direct admin contact

■■ TECHNOLOGY STACK

Frontend Technologies:

- Next.js 14 with App Router for modern React development
- TypeScript for type safety and better developer experience
- Tailwind CSS for utility-first styling and responsive design
- React 18 with hooks and context for state management

Backend Technologies:

- Firebase Firestore for NoSQL database with real-time updates
 - Firebase Authentication for secure user management
 - Firebase Storage for file uploads and CDN
 - Firebase Functions for serverless backend logic

Automation & DevOps:

- Python 3.8+ for web scraping and data processing
- GitHub Actions for CI/CD and automated workflows
 - Discord webhooks for real-time notifications
 - Vercel for frontend deployment and hosting

■ AUTO-SCRAPER SYSTEM

The auto-scraper is the heart of Freezy Platform, automatically collecting fresh job opportunities, courses, and tools daily.

Key Features:

- **Daily Automation:** Runs every day at 9 AM UTC (2 PM Pakistan time)
- **Multi-Source Scraping:** Pakistan jobs + worldwide remote opportunities
- **Smart Content Processing:** Quality-based tier assignment (Free/Pro/Enterprise)
- **Duplicate Detection:** Prevents content duplication with intelligent filtering
 - **Error Handling:** Graceful failure recovery and retry mechanisms
 - **Real-time Notifications:** Discord alerts on completion and errors

Content Sources:

- Pakistan job boards and company websites
- RemoteOK, Angellist, Wellfound for remote opportunities
- Coursera, edX, Udemy for free programming courses
- GitHub, ProductHunt, Dev.to for development tools

Resource Distribution Algorithm:

- 40% assigned to Free tier (basic opportunities)
- 40% assigned to Pro tier (quality content with keywords)
- 20% assigned to Enterprise tier (premium positions)

■ GITHUB ACTIONS WORKFLOW

What is GitHub Actions?

GitHub Actions is GitHub's built-in CI/CD platform that provides free automation. It's NOT MCP (Model Context Protocol) - it's a cloud-based automation service that runs your code on GitHub's servers.

How It Works:

1. **Scheduled Trigger:** Runs automatically every day at 9 AM UTC
2. **Free Ubuntu Server:** GitHub provides a fresh Ubuntu server
3. **Python Environment:** Installs Python 3.9 and required packages
4. **Secure Secrets:** Accesses encrypted Firebase credentials
5. **Script Execution:** Runs `auto_scraper.py` for 2-3 minutes
6. **Database Update:** Saves new resources to Firebase Firestore
7. **Notification:** Sends Discord alert with results

Benefits:

- **100% Free:** 2,000 minutes/month included with GitHub
- **Zero Maintenance:** Runs automatically without intervention
- **Reliable:** 99.9% uptime with built-in retry mechanisms
- **Transparent:** Complete logs and execution history
- **Scalable:** Can handle increased workload as platform grows

Workflow Configuration:

The workflow is defined in `.github/workflows/daily-scraper.yml` and includes:

- Cron schedule: `'0 9 * * *'` (daily at 9 AM UTC)
 - Manual trigger option for testing
- Environment variables for secure credential handling
 - Error handling and notification on failure

■■■■ ADMIN PANEL

Comprehensive admin interface for complete platform management.

Dashboard Features:

- User statistics and plan distribution analytics
- Resource metrics and engagement tracking
- Revenue tracking and subscription analytics
- System health monitoring and error rates

User Management:

- View all users with subscription details
- Approve/reject subscription upgrade requests
- Manual plan changes and user management
- Activity tracking and engagement metrics
- WhatsApp integration for payment verification

Resource Management:

- Complete CRUD operations for all resources
- Plan assignment for new resources (Free/Pro/Enterprise)
 - Bulk import/export functionality
- Content moderation and quality control
- Resource performance analytics

Payment Verification Workflow:

1. User upgrades to Pro/Enterprise plan
2. Payment made via JazzCash (+92 3225750871)
3. User shares screenshot via WhatsApp
4. Admin verifies payment in admin panel
5. Account upgraded with immediate access