

KARNVEER SINGH SONIGARA

SENIOR SOFTWARE DEVELOPER

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SUMMARY

Senior Software Developer with 6+ years of experience building scalable automation systems, RESTful APIs, and enterprise applications in Python and Java. As a senior member of the engineering team, I trained and mentored interns, designed project roadmaps, set up agile workflows, and handled technical leadership and software management across multiple products. I am highly adaptable, quick to pick up new technologies, and enjoy integrating modern stacks to drive business efficiency. My toolkit spans Spring Boot, Django, and FastAPI along with automation tools such as Selenium and Appium, and I have delivered UPI payout systems, chatbot solutions, and identity-verification tooling on real-time microservice architectures using Redis and FastAPI.

More recently, I use **AI agents** to design and ship **production-ready web and mobile applications end to end** — covering architecture, backend and frontend development, testing, deployment, security, and every other aspect a product or service needs to go live.

EXPERIENCE

Senior Software Developer

Scriza Pvt. Ltd | Noida · 02/2022 – Present

- Trained and mentored engineering interns — designed project roadmaps, established agile workflows, and fostered an out-of-the-box approach to problem solving, acting as senior software management for the team.
- Architected the end-to-end development of core products including automation suites, the Edu2All School ERP, hotel management solutions, and fintech services.
- Used AI agents to build production-ready web and mobile apps covering the full product lifecycle — requirements, architecture, backend/frontend, testing, deployment, and security.
- Built a UPI payout system for PhonePe, Paytm, HDFC, and YONO SBI with direct merchant integration (no third-party API).
- Created a WhatsApp bulk messenger using Selenium and automated mobile workflows with Selenium & Appium.
- Developed microservices with Django & Spring Boot, including report and callback handling.
- Built an RC and insurance verifier using CapMonster, Redis, and OpenCV; deployed FastAPI services with Celery, Redis, and Postgres.

Tech Software Support

IME India Pvt. Ltd | Noida · 02/2021 – 10/2022

- Provided backend support for in-house Java systems and automation.
- Built a WhatsApp Messenger tool and chatbot modules.

Junior Developer

Btrack World Pvt. Ltd | Udaipur · 01/2017 – 01/2021

- Worked on E-commerce, Fintech, and MLM platform backend systems.

KEY PROJECTS

AI-Agent App Delivery: Leveraged AI agents to ship production-ready web and mobile applications end to end, covering architecture, backend, frontend, testing, deployment, and security — every aspect a product or service needs.

Autonomous Linux AI Agent: Engineered an AI agent that operates a complete Linux environment independently — running commands, managing files and processes, and self-directing multi-step tasks.

Trading Bot (Prototype): Built a prototype algorithmic trading bot with strategy execution, real-time market-data handling, and basic risk controls.

Number Management System: Developed a centralized platform to provision, rotate, and track virtual/phone numbers across messaging and OTP workflows.

E-commerce + MLM API Platform: Handled orders, referrals, and commissions for a multi-level-marketing API stack.

HRMS with Face Recognition: Built a biometric attendance system using OpenCV and face recognition.

UPI Automation: Created a UPI automation system with direct merchant integration and no third-party APIs.

PAN, Aadhaar & RC Verifiers: Implemented verification flows using OCR, Redis, and session-based microservices.

TATA AIG RC Automation: Built a smart RC insurance verifier using CapMonster, Redis, and API fallbacks.

Livemint CRIF Credit Report Extractor: Integrated a CRIF credit-report dashboard with an OTP-based token system.

Voter ID Data Extractor: Bypassed CAPTCHA and extracted voter data using the requests library and Redis-persisted sessions.

TECHNICAL SKILLS

Backend & API: Python, Java, JavaScript (Node.js), Bash, FastAPI, Django, Spring Boot, Flask, REST APIs, GraphQL, OAuth2, JWT, WebSockets, Microservices, Event-Driven Architecture.

AI Agents & Automation: AI agent orchestration for full-stack app delivery, autonomous Linux agents, OCR (Tesseract, EasyOCR, PaddleOCR), Computer Vision (OpenCV, YOLOv5, Face Recognition).

Infrastructure & DevOps: Docker, Docker Compose, Nginx, Gunicorn, Uvicorn, Linux Server Administration (CentOS, Ubuntu), Shell scripting, VPS Deployment.

Asynchronous Processing: Redis (sync & asyncio), Celery, RQ, Background Task Queues, Rate Limiting, Retry Handling.

Automation & Scraping: Requests, httpx, BeautifulSoup, lxml, PyQuery, Selenium, Playwright, Appium, CapMonster, AntiCaptcha, Headless Browsing.

Messaging & Security: WhatsApp Web Automation, Telegram Bot Integration, API Security, OTP Verification Systems, Identity Locking.

Databases: PostgreSQL, MySQL, SQLite, Redis, JSON/JSONL.

Frontend & Tools: HTML/CSS, React, Vite.js, Git, GitHub, GitLab, Postman, Burp Suite, VSCode, PyCharm, PyInstaller.

SPECIAL PROJECTS & DOMAINS

- **Government Portal Automations:** ITR, TDSCPC, Vahan, UIDAI, Udyam, Insurance.
- **Lead Generation Bots:** Google Maps + WhatsApp scraping.
- **Recon Bots:** Bug-bounty scanners with Nmap, WhatWeb, Nuclei.
- **Payment Gateways:** Merchant Pay-in/Pay-out automation, UPI flows.
- **Offline License Key Systems:** Installer-locked tools with OTP email verification.

INTERESTS & EXTRACURRICULARS

- Swimming Coach — mentored young athletes
- Basketball
- Leadership at M.D.S. Sr. Sec. School
- Reading technical books and self-growth content