

Alee Hamza

Python Backend Developer · Django · FastAPI · REST APIs

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Multan, Pakistan · Open to remote & on-site

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PROFILE

Python Backend Developer with **3+ years of professional experience** building, maintaining and optimizing backend applications, SaaS platforms and AI-powered services. Hands-on with **Django, Django REST Framework, FastAPI and Flask**; experienced in designing **RESTful APIs**, integrating third-party services (OAuth 2.0, webhooks, Stripe, WhatsApp, GoHighLevel, OpenAI), and working with **PostgreSQL, SQL, MongoDB and Redis**. Currently a Senior Full Stack Developer shipping production integrations used by agencies, with a research background in deep learning (2 papers in *Nature Scientific Reports*). Known for clean, secure, well-documented code, methodical debugging and close collaboration with developers, DevOps and stakeholders.

TECHNICAL SKILLS

Languages	Python (OOP, async), JavaScript, TypeScript, SQL, C++
Backend Frameworks	Django, Django REST Framework, FastAPI, Flask, Pydantic, SQLAlchemy, Node.js
APIs & Integrations	RESTful API design, OAuth 2.0, JWT/session auth, Webhooks, Stripe API, OpenAI/GPT API, GoHighLevel API, n8n, Zapier
Databases	PostgreSQL, SQL, SQLite, MongoDB, Redis, Supabase, Firebase — schema design, indexing, query optimization
DevOps & Tools	Git / GitHub (branching, PR reviews), Docker, CI/CD, Linux, Vercel, DigitalOcean, Google Colab
AI / Data	PyTorch, TensorFlow, OpenCV, YOLO, Pandas, NumPy, Scikit-Learn, BeautifulSoup (web scraping), model deployment
Practices	Clean code, secure coding, API documentation, debugging & troubleshooting, performance tuning, Agile collaboration, mentoring

PROFESSIONAL EXPERIENCE

Senior Full Stack Developer — GHM Tech LLC

May 2025 – Present

Remote · SaaS products & integrations for the GoHighLevel Marketplace

- Develop, maintain and optimize **backend services and REST APIs** powering multiple production SaaS products and GHM Marketplace apps.
- Design and integrate **third-party services** — OAuth 2.0 authorization flows, webhooks, Stripe payments and WhatsApp messaging APIs — with secure token handling.
- Design **database schemas** and optimize queries and application performance, scalability and security for production workloads.
- Troubleshoot, debug and resolve production issues across backend, frontend and integration layers.
- Collaborate with developers, DevOps and stakeholders to gather requirements; **mentor junior developers** and improve code-review, Git and documentation practices.

Stack: Python, FastAPI, Django, Node.js, React, PostgreSQL, Redis, Docker, Git, OAuth 2.0, Stripe

Research Assistant (AI & IoT) — MNS University of Agriculture

Jan 2023 – Dec 2024

Multan · Smartraps: AI-powered IoT pest-surveillance system

- Led development of **Smartraps**, an IoT device with a Python computer-vision pipeline that captures field images, runs deep-learning inference and delivers pest counts, temperature and humidity to an Android app.
- Built **Python data pipelines** for image collection, annotation and model evaluation; trained and deployed YOLO and Faster R-CNN models for real-time insect detection.
- Published research in **Nature Scientific Reports** (2025, 2026); supervised junior researchers and contributed to grant proposals.

Stack: Python, PyTorch, TensorFlow, OpenCV, YOLOv8, Faster R-CNN, ESP32 / IoT, Git

Technical Trainer — NAVTTC (Govt. of Pakistan)

Oct 2025 – Dec 2025

- Trained students in **Python**, Computer Vision and Automation through hands-on programming workshops and projects.

Earlier Roles

- **Visiting Lecturer**, Beaconhouse Senior Campus (Aug 2023 – Jan 2024) — taught Python and CS-2210 to O-Level students.
- **Technical Writer (Freelance)**, Technolynx, Hungary (Aug 2023 – Aug 2024) — technical articles on AI and emerging tech.
- **Research Virtual Assistant**, Prof. Salman Nazir, Univ. of South-Eastern Norway (Apr 2022 – Aug 2023) — paper reviews & proofreading.
- **LMS Administrator (Internship)**, MNS University of Agriculture (Aug 2020 – Jul 2021) — LMS, IT support, networking.

KEY PROJECTS

GPT Lawyer — Legal Assistant API 2024	GOWA — WhatsApp × GoHighLevel 2025 – Present
Django web app that analyzes legal cases and returns relevant legal actions and articles; integrated the GPT-3.5 API and designed a PostgreSQL database of legal articles and case data. Django REST Framework · PostgreSQL · OpenAI API · NLP	Integration platform syncing WhatsApp conversations into GHL and triggering messages from workflows; multi-subaccount dashboard, webhooks and billing. gowa.app REST APIs · Webhooks · OAuth 2.0 · WhatsApp API · PostgreSQL
Funnel Manager — Data Export Service 2025	NobleDar — PropTech Booking Platform 2026
Connects securely through the official OAuth flow (no stored passwords) and exports funnel data — page IDs, preview URLs, builder links — to CSV with real-time updates. funnelmanager.ghltechy.com OAuth 2.0 · REST API integration · React	Full-stack short-term rental platform: property discovery, listing management, booking workflows, authentication and payment integration on a scalable architecture. nobledar.com Backend APIs · Auth · Payments · SQL database
Smartraps — AI & IoT Pest Surveillance 2023 – 2024	Bloom & WorldCat Scraper 2021
Solar-powered smart trap with deep-learning detection and a mobile dashboard; featured by NUST Research and published on Google Play. Python · PyTorch · YOLOv8 · OpenCV · IoT · Android	Faster R-CNN flower recognition deployed as a Django web app; Python/BeautifulSoup scraper that collected 4,000+ book records for the university digital library. Python · Django · TensorFlow · BeautifulSoup
SaaS & Extensions 2025 – 2026	Portfolio
GHL Cloner Pro (Chrome MV3 + Stripe licensing), Funnel Guard (anti-scraping protection), AceWidget (WCAG 2.1 accessibility), TryMermaid (diagram builder), RunaVault (team secrets manager).	Full project details, screenshots and live links: github.com/aleehamza25 · linkedin.com/in/aleehamza25

PUBLICATIONS

- Hakim A., Habib Ur-Rahman M., **Hamza A.** et al. "Evaluation of YOLOv7–v13 models for multi-class small insect pest detection using the five-pest dataset." *Scientific Reports* 16, 23059 (2026).
- Hakim A., Srivastava A.K., **Hamza A.** et al. "YOLO-Pest: an optimized YOLOv8x for detection of small insect pests using smart traps." *Scientific Reports* 15, 14029 (2025). doi:10.1038/s41598-025-97825-3
- Rashid M., Qadri S., Razzaq A., **Hamza A.**, Hashim S. "Multispectral Approach for Wheat Yield Estimation Using Deep Learning." *J. Computing & Biomedical Informatics* 8(02) (2025).
- Under review / submitted: *Smart Agricultural Technology* (2024) · *Internet of Things* (2024) · 3 conference abstracts incl. ICFAS-23.

EDUCATION

BS Information Technology 2017 – 2021
MNS University of Agriculture, Multan
ICS — Computer Science & Statistics 2015 – 2017
Concordia Colleges, Multan

CERTIFICATIONS

Deep Learning Specialization 2023
DeepLearning.AI · Coursera
Introduction to Deep Learning 2021
HSE University · Coursera
Python — Learn by Projects 2021
Udemy

LEADERSHIP

Mentor to junior developers at GHL Techy · Supervised junior researchers at MNSUAM · Camp Himalayas youth leadership program (Youth Impact) · Organized leadership & team-building workshops (Cosmic League, Cricaddiction).