

Mohammad Hussein Ghafoori

Backend & AI Engineer

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🔗 GitHub

🗣 Languages: English, Persian

📍 Tehran, Iran

🌐 Portfolio

🌐 LinkedIn

EDUCATION

High School Diploma (In Progress) — Mathematics & Physics Track

Self-Study & Independent Research

SKILLS

Programming Languages

Python

JavaScript

Frameworks & Libraries

Django

Django REST Framework

FastAPI

Databases & Cache

PostgreSQL

Redis

SQLite

DevOps & Tools

Docker

Git

GitHub Actions

Linux

PROFESSIONAL SUMMARY

Backend & AI Engineer with a Physics & Mathematics foundation. I architect scalable systems with Django, FastAPI, and PostgreSQL — reducing latency by 40% and handling 1.2K concurrent requests. Physics-inspired problem solver delivering clean, testable code.

EXPERIENCE

Backend Developer & AI Engineer

Jun 2026 - Present

Self Employed • Tehran, Iran

Designed and deployed 5 production-grade RESTful APIs with Django and DRF, handling 1.2K concurrent requests and reducing latency by 40% through query optimization and Redis caching. Engineered a Genetic Algorithm optimization pipeline processing 5,000+ spatial data points, achieving 98% convergence accuracy. Developed a physics simulation engine with 98% test coverage and CI/CD via GitHub Actions, cutting deployment time from 2 hours to 12 minutes. Architected secure backend systems with JWT authentication and role-based access control. Built bilingual (English/Persian) interfaces without performance trade-offs. Contribute to open-source projects with thorough code reviews.

PROJECTS

Electro-Thermal PINN

Physics-Informed Neural Network solving coupled Maxwell's equations and heat equation with Joule heating. Mesh-free solver with 3 architectures (MLP, MLPPINN, TransformerPINN). Relative L2 error < 9e-04 for electric field.

PyTorch

Python

NumPy

Matplotlib

Code: <https://github.com/mohammad-hussein-dev/electro-thermal-pinn>

Django Task Manager

Production-ready task management system with JWT authentication, category management, and bilingual UI. 96% test coverage, Docker support, and CI/CD via GitHub Actions. Sub-200ms API response times.

Docker

Celery

Redis

PostgreSQL

DRF

Django

Code: <https://github.com/mohammad-hussein-dev/django-task-manager>

Projectile Physics Simulator

Interactive 2D projectile motion simulator using kinematic equations. Features 100% test coverage, bilingual output, and clean modular architecture with NumPy vectorization.

pytest

Matplotlib

NumPy

Python

Code: <https://github.com/mohammad-hussein-dev/projectile-physics-simulator>