

# Emad Ehsanrad

## Senior Software Engineer



✉ emad.ehsanrad@gmail.com    [in /emadehsanrad](#)    [GitHub /CodeWithEmad](#)

### SUMMARY

Senior Software Engineer with over **7 years** of experience building **scalable, user-focused** web applications in Agile environments. Skilled in **Python, JavaScript**, and frameworks like **Django** and **FastAPI**, I've **delivered efficient, high-performance** solutions for **100,000+ users**. Consistently worked in **international environments** with **cross-functional teams** to drive growth through **innovative solutions**. Committed to **continuous learning** and adapting to emerging technologies. Active **open-source contributor**.

### SKILLS

**Languages:** Python, JavaScript, TypeScript, SQL, GraphQL.

**Databases:** MySQL, PostgreSQL, MongoDB, ClickHouse, Neo4J.

**Frameworks:** Django, Flask, FastAPI, Next.js.

**Cloud Platforms:** Amazon Web Services (AWS).

**Tools:** Kubernetes, Helm, ELK, Docker, GitHub Actions, GitLab CI, Jenkins, Prometheus, Grafana, OpenTelemetry, Kafka, RabbitMQ.

### WORK EXPERIENCE

#### Senior Software Engineer, troweb

Remote - Dubai, UAE

*AI powered knowledge management system (KMS) for businesses.*

Aug 2023 - Present

- Developed **AI-driven** solutions (**RAG pipelines, agentic workflows**) to enhance automation and **intelligent decision-making**.
- Engineered scalable microservices using **FastAPI** and **gRPC**, ensuring **high-performance inter-service communication**.
- Designed and implemented an **event-driven** architecture leveraging **Kafka** and **Kubernetes**, reducing latency by 30%.
- Contributed to achieving **SOC 2 Type II** certification by collaborating with compliance teams on **quality** and **security** standards.
- Mentored new engineers through a **custom onboarding program**, accelerating team integration and fostering a culture of **knowledge-sharing**.

#### Software Engineer, edSPIRIT

Remote - Dubai, UAE

*Cloud-based Open edX solutions, providing hosting, consulting, and customizations.*

May 2021 - Aug 2023

- Led the design and development of a **scalable SaaS platform**, adopted by **200+** academic institutions and universities.
- Managed seamless migration of infrastructure from **AWS EKS** to in-house clusters, ensuring a **highly available and resilient** environment with **99.99%** uptime.
- Recognized as a **core contributor** in the **Open edX community**, an open-source learning platform used by millions.
- Developed a real-time KPI dashboard using **OpenTelemetry**, **Grafana**, and custom data pipelines, **improving operational visibility by 40%**, and pushing the culture of making **data-driven decisions**.
- Partnered with the sales team in client meetings, **translating complex technical concepts** into actionable solutions, leading to improved customer satisfaction and **faster deal closures**.

#### Software Engineer, Pubnito

Remote - Toronto, Canada

*Content-based platforms and services provider.*

Sep 2019 - Apr 2021

- Established **multi-tenancy** support, enhancing **scalability** and reducing operational costs by **30%**.
- Devised a web scraping tool that **automated 100%** of the EPUB creation workflow, saving our content team **3+ months of work**, which Aided to **securing a partnership** with Rice University.
- Deployed **SSO authentication with Keycloak**, boosting security, system efficiency, and enhancing user experience.
- Migrated monolithic applications to a containerized environment using **Docker** and **Kubernetes**, improving deployment efficiency and system reliability.
- Empowered all teams with **workshops**, boosting **skill development** and applying new techniques in daily tasks.

#### Backend Developer, InstructHub

On site - Tehran, Iran

*Cutting-edge company specializing in delivering innovative e-learning solutions.*

Sep 2017 - Jan 2019

- Refactored a large **legacy codebase** from Python 2 to 3, resulting in system performance and using modern libraries.
- Collaborated with stakeholders to redesign core business processes, **cutting turnaround times by 45%**.
- Optimized database queries and introduced **caching strategies**, reducing average API response time.
- Configured and managed **CI/CD** pipelines that reduced deployment times by **70%** and minimized production errors.

- Set up centralized **logging and monitoring** with **ELK stack**, reducing issue detection time **from days to hours**.

## Backend Developer, West Electronics

On site - Tehran, Iran

*Smart Home Applications.*

Jan 2016 - Sep 2017

- Implemented **backend infrastructure** using **Python** and **Django**, ensuring efficient **data processing** and **storage**.
- Managed seamless **integration of IoT devices** with backend systems, enabling reliable **communication**.
- Developed and maintained **RESTful APIs** to support seamless integration with mobile and web applications.
- Optimized **backend performance** by implementing **asynchronous processing** and **database indexing**, reducing response times by **25%**.

## EDUCATION

### Kermanshah University of Technology

Kermanshah, Iran

*Bachelor of Science in Telecommunication Engineering*

Sep 2012 - May 2016

### Javad Al'Aeme

Kermanshah, Iran

*Diploma in Mathematics and Physics*

Sep 2008 - May 2012

## VOLUNTEER EXPERIENCE

### Content Creator, CodeTherapy

Remote

*YouTube channel teaching Python to Persian-speaking audiences.*

Sep 2019 - Present

- Created educational videos on **Python programming**, fostering a growing **community of learners**.
- Designed **step-by-step tutorials** and **project-based lessons** to simplify complex programming concepts for beginners.

### Technical Mentor, Local Coding Bootcamp

On site

*In-person coding bootcamp for aspiring developers.*

Jul 2020 - Present

- Mentored **100+** students in Python, JavaScript, and development, providing guidance and support in their learning journey.
- Developed **curriculum materials** and **resources** to help students grasp complex concepts and improve their coding skills.

## PROJECTS

**Here to Help:** Free resources and services for crisis support: Essential resources in difficult times, with **1000+ daily active users**.

**Painless Maintenance:** **Helm chart** for deploying **maintenance pages** in Kubernetes, preserving user experience during downtimes.

**Natural SQL Explorer:** **AI-powered** tool converting **natural language** to **SQL queries** with schema discovery and **real-time results**.

**Open Source Contributions:** Actively contributed to projects like **Apache Superset**, **Django**, **Pydantic**, and **Open edX**.

## CERTIFICATES

**AWS Cloud Practitioner**, Amazon Web Services

Feb 2025

**Neo4j Certified Professional**, Neo4j Graph Academy

Jan 2025

**Cisco Certified Network Associate (CCNA)**, Institute of Applied Science Technology

Aug 2022

## LANGUAGES

**English:** Full professional proficiency

**German:** Elementary proficiency