Ali Alidoust

Senior Software Engineer
AI/ML & Systems

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Professional Summary

Senior Software Engineer with 11+ years of experience building production-grade **AI/ML systems**, high-performance **gameplay/engine technology**, and scalable **backend platforms**.

- **AI/LLM Systems**: Delivered production LLM solutions for invoice processing and document understanding.
- **Machine Learning**: Developed production ML systems for automotive eye-tracking, real-time animation, and speech processing – from research to embedded deployment.
- **Game Development**: Shipped AAA and indie titles with expertise in Unreal Engine/Unity gameplay systems, multiplayer networking, and AI-driven animation. Optimized performance for 100M+ player ecosystems.
- **Backend & Systems**: Built scalable platforms handling $2M+ daily transactions and high-traffic APIs using microservices and distributed architectures.

Focused on combining advanced AI with real-time, high-performance systems across games, embedded devices, and cloud-scale applications.

Technical Skills

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AI/ML	PyTorch, TensorFlow, SciPy, OpenAI/Azure AI; Computer Vision, NLP, LLM integration, model optimization, embedded inference
Game Tech	Unreal Engine 4/5, Unity; gameplay programming, replication systems, behavior trees, procedural animation, profiling/optimization
Programming	Java, C++, Python, TypeScript; C#, JavaScript, Lua
Backend	Spring Boot, Node.js, React/Nest.js; distributed systems, microservices
Systems & DevOps	Docker, Kubernetes, CI/CD (GitLab/Azure), Linux
Databases	MongoDB, MySQL, MSSQL, Redis
Tools	Perforce, Jira, Unreal Editor, profiling/debugging toolchains
Languages	English (Fluent), Farsi (Native)

Professional Experience

Aug 2025–Ongoing   **AI Engineer**, *Rillion AB*, Stockholm, Sweden
- Worked as an AI Engineer, developing LLM-powered invoice processing solutions
- Developed solutions that reduced invoice capture costs by 55% while improving maximum accuracy to 95% from 22%
- Deployed AI based document understanding systems on Azure Cloud, processing tens of thousands of invoices weekly
- **Technologies:** Python, Azure, OpenAI, Mistral, Anthropic
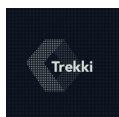
Feb 2023–Apr 2025   **Senior IT Consultant**, *Trekki AB*, Stockholm, Sweden
(Client placements executed under Trekki employment.)
- Delivered engineering work for multiple clients including Mojang Studios, Tobii, and Embark Studios.
- Implemented Unreal Engine 5 gameplay systems for a AAA title, improving responsiveness and replication stability.
- Built real-time eye-tracking algorithms for automotive systems, contributing to production-ready ML pipelines.
- Enhanced Minecraft core systems in Java, improving stability and performance across the game's service stack.
- **Technologies:** Java, C++, Python, Unreal Engine 5

Jun 2024–Jan 2025   **Senior Java Engineer**, *Mojang Studios*, Stockholm, Sweden
- Engineered core gameplay systems in Minecraft, contributing to stability and performance for 140M+ monthly active players.
- Optimized critical systems, cutting server-side latency and improving tick-rate consistency.
- **Technologies:** Java 21, Jira, Scrum, Performance Profiling

Oct 2023–Jun 2024   **Machine Learning Engineer**, *Tobii*, Stockholm, Sweden
- Designed and delivered real-time eye-tracking algorithms for automotive DMS, improving detection robustness under variable lighting and head poses
- Reduced inference latency by 12% using quantization and pruning techniques
- Implemented computer vision pipelines processing 30fps video on ARM-based embedded systems
- **Technologies:** C++17, Python, PyTorch, SciPy, Embedded Linux

Feb 2023–Sep 2023   **Gameplay Engineer**, *Embark Studios*, Stockholm, Sweden
- Implemented core gameplay mechanics for AAA multiplayer title using Unreal Engine 5
- Optimized replication systems, reducing bandwidth by 4% while preserving visual fidelity
- Developed UI widgets supporting localization for multiple languages
- **Technologies:** C++17, Unreal Engine 5, AngelScript, Blueprints, Perforce

Sep 2021–Feb 2023   **AI/Game Developer**, *Gamecan OÜ*, Pärnu, Estonia
- Built neural-network-based procedural animation systems, reducing mocap costs by 40%
- Ported ML models from C# to C++ with full Unreal Engine runtime integration
- Implemented AI navigation system supporting dynamic environments
- Implemented complex NPC behavior systems using Behavior Trees, improving gameplay realism and decision-making fidelity
- **Technologies:** Unreal Engine, Unity, C++, ML, Behavior Trees

Dec 2017–Sep 2021	**Full-Stack Engineer**, *Pasargad Electronic Payment*, Tehran, Iran

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پاسارگاد

- Led development of payment and benefits processing platform handling $300K+ daily transactions
- Designed microservices architecture reducing API response times from 800ms to 120ms
- **Technologies:** Java, Spring Boot, Node.js, GraphQL, Kubernetes

2014–2017	**Various Engineering Roles**

- Backend Developer at Viratech Sharif - Built enterprise integration systems using Mule ESB
- Researcher at Sharif University - Developed NLP tools for Persian language processing
- System Administrator - Managed infrastructure for 30+ employee engineering company

Education

2013–2016	**M.Sc Artificial Intelligence**, *Sharif University of Technology*, Tehran

2007–2013	**B.Sc Software Engineering**, *Azad University of Central Tehran*, Tehran