ABDUSSAMAD FAROOQ SAEED

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About

Senior AI Engineer with high performance computing and advanced Linux systems expertise. I build production AI systems using LLMs and computer vision models. My work spans autonomous systems, embedded AI, and large scale HPC environments. I deliver secure and efficient software with measurable performance gains. From research to deployment, I ship systems that run reliably in real world conditions.

Work Experience

AI Engineer (Full-Time) Feb 2026 — Present
Etlaq.sa *Al-Khobar, Saudi Arabia*
- Designing and building agentic AI systems for Vibe coding and automated web development
- Developing production grade Next.js applications powered by AI agents
- Delivering enterprise AI solutions for multiple Etlaq clients

Agentic AI Engineer Aug 2025 — Feb 2026
Traffic Hi Tech Company *Al-Khobar, Saudi Arabia*
- Built enterprise AI systems for live traffic analysis and optimization across Saudi infrastructure

Enterprise AI Specialist Aug 2025 — Jan 2026
National Center for Vegetation Cover Development and Combating Desertification *Riyadh, Saudi Arabia*
- Designed and deployed on premise enterprise AI platforms for project management and land use land cover analysis

Agentic AI Engineer (Part-Time) June 2025 — Jan 2026
Etlaq.sa *Dhahran, Saudi Arabia*
- Built AI agents to automate development workflows and improve engineering productivity

Cyber Security AI Researcher (Part-Time) Jan 2025 — May 2025
Interdisciplinary Research Center for Intelligent Secure Systems, KFUPM *Dhahran, Saudi Arabia*
- Built AI agents for automated penetration testing using lightweight LLMs
- Designed and maintained Linux infrastructure supporting multiple postdoctoral cybersecurity researchers

Arabic and Islamic NLP AI Engineer (Part-Time) Sep 2024 — Dec 2024
SDAIA Joint Research Center for Artificial Intelligence, KFUPM *Dhahran, Saudi Arabia*
- Led Arabic NLP initiatives including LLM pretraining, fine tuning, and evaluation
- Built a production RAG system with custom retrieval. Improved query accuracy by 35 percent

Cyber Security AI Engineering Intern Jan 2024 — Jun 2024
Interdisciplinary Research Center for Intelligent Secure Systems, KFUPM *Dhahran, Saudi Arabia*
- Created cybersecurity datasets with 35K plus malware scripts used to train over 20 LLMs
- Built a multimodal AI agent with terminal control, Python execution, web search, and RAG

Education

King Fahd University of Petroleum and Minerals Dhahran, Saudi Arabia
Bachelor of Science in Computer Science *Aug 2019 — Aug 2025*

Relevant Coursework: Computer Graphics, Game Programming, Cybersecurity, Artificial Intelligence, Independent Research in AI and Cybersecurity

Publications & Research

Under Review: Automating Cyber Security Penetration Testing Tasks with AI Agents Using Lightweight LLMs. First author submission to ACM journal. Expected release mid 2026.

Key Projects

Space Debris Detection CubeSat System (Senior Capstone) 2024

- **AI and ML**: Built YOLOv11 based debris detection system. Achieved over 60 percent accuracy on Raspberry Pi 5 through model and pipeline optimizations
- **Embedded Systems**: Developed C and C++ ADCS with gyroscope and magnetometer achieving under 2 degree orientation error
- **Communication**: Implemented RF telemetry for real time data transfer and remote AI model updates
- **Simulation**: Built 3D orbital simulator in Godot for trajectory testing and collision prediction
- **Ground Control**: Developed Flask based control station with telemetry visualization
- **System Integration**: Delivered complete 2U CubeSat prototype under 5,000 SAR budget

Arcade Gaming Consoles 2026

- Built custom arcade console using Raspberry Pi 5
- Developed WASM based games targeting legacy hardware platforms

High Performance Custom Compiler (github.com/Airbus5717/rotate) 2021-2022

- Built recursive descent compiler in C and C++
- Achieved 150 plus MB per second tokenization on i7 and 186 MB per second on i9
- Implemented robust syntax error detection and reporting
- Maintained compatibility with C standard library while preserving C style syntax

Deep Agent AI Systems 2024-2026

- **Deep Agent Architectures**: Designed multi agent systems with long horizon planning, self reflection, and goal driven execution
- **Advanced Retrieval and Memory**: Built RAG systems with custom embeddings and dynamic context selection. Improved relevance by 40 percent
- **Persistent Agent Memory**: Implemented long term and episodic memory for multi session continuity
- **Agent Orchestration and Tooling**: Developed autonomous workflows with terminal access, Python execution, and web retrieval
- **Inference and Systems Optimization**: Optimized agent inference pipelines and scheduling. Reduced end to end latency significantly while preserving accuracy

Technical Skills

- **Programming Languages**: Python, C, C++, CUDA, JavaScript, Go, C#, SQL, Zig, Odin, Assembly
- **AI and ML**: PyTorch, Hugging Face Transformers, YOLO, TinyGrad, OpenCV
- **Tools and Systems**: Linux, Git, Docker, CMake, Ninja, Vim, Unity, Raylib
- **Specialization**: Systems programming, High Performance Computing, Cybersecurity, Computer Vision, NLP

Certifications

- NVIDIA Fundamentals of Accelerated Computing with CUDA C and C++

Volunteering

Accountant and Program Supervisor Summer 2024 and 2025

Mawhibah 2025 Summer Program, KFUPM *Dhahran, Saudi Arabia*

- Supervised over 160 high school students in intensive STEM programs
- Managed program finances and operational logistics
- Taught ESP32 based IoT course for high school students

Languages

- Arabic Native
- English Native

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