Amir Nourinia

Summary

Innovative software engineer with deep expertise in systems and graphics programming, medical imaging, and AI-driven solutions. Passionate about designing and implementing high-performance, scalable software architectures that bridge cutting-edge technology with healthcare innovation.

Education

2016–2023 **M.Sc. in Computer Science - Biomedical Computing**, *Technical University of Munich*, Munich, Germany
Coursework completed; thesis incomplete.

2010–2015 **B.Sc. in Electrical Engineering - Bioelectrics**, *Amirkabir University of Technology*, Tehran, Iran
Thesis: Smart MRA Injection Robot.

2009–2010 **Pre-University Diploma**, *Madani High School – National Organization of Exceptional Talents (NODET)*, Tabriz, Iran

2006–2009 **High School Diploma**, *Madani High School – National Organization of Exceptional Talents (NODET)*, Tabriz, Iran

Work Experience

07/2023–10/2024 **Senior Software Engineer**, *Holo-Light GmbH*, Munich, Germany
- Led XR system design with an emphasis on low-latency streaming.
- Designed and implemented a cross-platform OpenXR library.
- Developed Android XR applications using NDK, Java/Kotlin, and MediaCodec.
- Created immersive 3D GUIs in Unity for AR/VR experiences.
- Developed a WebRTC-based real-time communication service.
- Implemented gRPC-based protocols for efficient microservice communication.
- Optimized XR graphics using OpenGL ES, Vulkan, and GLSL.
- Mentored team members on C++, algorithms, and clean code practices.

08/2022–03/2023 **Working Student – Software Developer**, *One-Projects GmbH*, Munich, Germany
- Engaged in C++ systems programming and object-oriented Python library development.
- Developed applications using Qt and ImGui.
- Enhanced build systems with Conan and Python scripts.
- Implemented server load control scripts in Python.

02/2022–04/2022 **Working Student – Software Developer**, *AST (Adaptive Sensory Technology) GmbH*, Munich, Germany
- Performed C++ systems programming and graphic shader programming (GLSL/HLSL).
- Set up cross-compilation pipelines using LLVM and CMake.
- Configured remote access network infrastructure.

04/2021–06/2021 **Working Student – Software Developer**, *Fireflow GmbH*, Munich, Germany
- Developed iOS applications using SwiftUI.
- Refactored and documented legacy iOS code.
- Improved build systems and addressed user-reported issues.

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08/2020–02/2021 **Working Student – Software Developer**, *SurgeVision GmbH*, Munich, Germany
- Developed algorithms for medical image processing.
- Utilized Qt for application development and implemented test-driven computer vision algorithms (OpenCV, GoogleTest).
- Set up Jenkins-based CI/CD pipelines.

08/2019–03/2020 **Working Student – Software Developer**, *Brainlab GmbH*, Munich, Germany
- Conducted research and developed algorithms for medical image processing using C++ and Python.
- Developed computer vision algorithms, performed computational modeling, and created data visualizations.

Publications

2016 *Design and fabrication of a nanofibrous polycaprolactone tubular nerve guide for peripheral nerve tissue engineering using a two-pole electrospinning system* [Link]

2020 *Orientation of directional deep brain stimulation leads on CT: Resolving the ambiguity* [Link]

Skills

Programming	C++, C#, Java, Kotlin, Python, Rust, Swift
Graphics & XR	OpenGL, OpenGL ES, Vulkan, GLSL, OpenXR, Unity, Unreal Engine
Networking	WebRTC, TCP/UDP, gRPC
Development	Systems programming, cross-platform library design, CI/CD, build system optimization

Languages

English	Proficient (C2)
German	Intermediate (B1)
Others	Persian, Azerbaijani, Turkish (Native)

Interests

Numerical Programming, Algorithms, Neuroscience, Computer Vision, Machine Learning, Computer Graphics, Software Engineering