

Mola Pahnadayan

SOFTWARE DEVELOPER

Contact

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Profile

A seasoned programmer with over 20 years of experience specializing in Qt/C++ and a track record of success in GIS systems, condition monitoring, and creating robust simulation tools. Known for developing scalable, cross-platform solutions and leading innovative projects in dynamic team settings.

WORK EXPERIENCE

- **Software Manager & Developer | Datall, Tehran**
May 2022 – Present
Oversee development operations and contribute to software solutions, enhancing efficiency and monitoring across platforms.
- **Advisory Software Engineer | Mojpardaz Alborz, Tehran**
January 2012 – Present
Provide expert guidance on software development projects, ensuring the adoption of best practices and delivering high-quality applications.
- **Head Of Development | Sharif University of Technology, Tehran**
April 2015 – May 2019
Led a dynamic development team in executing strategic plans for software innovations while fostering an environment of learning and growth.
- **Senior Software Engineer | Mojpardaz Basir, Tehran**
January 2008 – January 2012
Promoted software excellence and problem-solving acumen, driving the creation of cutting-edge applications for various needs.

EDUCATION

* Bachelor of Software Engineering

Skills

- Proficient in Qt/C++/QML and Boost/C++ for robust hardware and software interfacing.
- Skilled in socket programming and multithreading to support asynchronous task management.
- Database management using PostgreSQL, SQLite, and Microsoft SQL Server.
- Development of cross-platform software for Linux and Windows operating systems.
- Extensive Python programming for scripting and automation.
- Proficient in user experience optimization for desktop applications.
- Utilization of OpenSceneGraph, Osgearth, and Quantum GIS for sophisticated GIS applications.
- Software deployment using Cmake and version control with Git.
- Experience with virtualization tools such as Linux KVM and multimedia frameworks such as Gstreamer.
- Design skills including Inkscape, Gimp, and Blender for creative project needs.
- Proficient in embedded Linux development for IoT and small-scale devices.
- Experience with deploying and managing Linux on single-board computers such as Orange Pi 5 and Raspberry Pi 4/5.
- Hardware interfacing and GPIO programming for sensory and control applications on Orange Pi and Raspberry Pi platforms.

Projects

- **GIS Applications:**
 - Executed projects involving interactive GUI designs with QML/Qt/C++ for 2D visualization and Qt/OsgEarth/C++ for 3D models.
 - Developed custom protocols over TCP/IP for data communication and utilized PostgreSQL with PostGIS for spatial data management.
- **Condition Monitoring Systems:**
 - Architected and developed a modular server utilizing Drogon/C++ and interfacing with a PostgreSQL database, seamlessly integrating OPCUA Server & Client to drive comprehensive desktop monitoring software.
 - Implemented advanced computational models with Armadillo/C++ for real-time analysis and monitoring of machinery performance, focusing on reciprocating compressors, steam turbines, and gas turbines.
 - Constructed a sophisticated graph of nodes to simulate and compute cyclic operations, enabling precise condition assessments and predictive maintenance capabilities to minimize downtime and optimize efficiency.
- **Simulation Tools:**
 - Designed a suite of simulators, including AIS and Vibrating Sensor Data simulators, reinforcing test-driven development and validating the integrity of software solutions.
- **Open Source Contributions:**
 - Fedora Core 6: Contributed to theme development and enhancements.
 - Project Atlas: Integrated Linux build process (<https://github.com/tqjxlm/Atlas>).
 - Qt Contributions: Added PostgreSQL notification to Qt (<https://bugreports.qt.io/browse/QTBUG-17826>).
 - Developed and maintained Qt Widgets like QSpectrum (<https://github.com/mola/QSpectrum>) and QtPieMenu (<https://github.com/mola/QtPieMenu>).
 - Additional projects and contributions detailed at <https://github.com/mola>.

Languages

- Fluent in Persian
- English