Saad Ur Rehman

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SUMMARY

A seasoned software developer with expertise in C++ programming, skilled at creating efficient and high-performance solutions, for Linux and Windows, having 4+ years of experience across renowned organizations.

EXPERIENCE

BMW Group
Jan 2023 - Present

Software Developer
Munich, DE

- Software development in C++ 17 as a partner for maintaining, improving and upgrading driving simulators.
- Developing and designing new features for a large-scale software in C++ 17 on linux.
- Designing and writing unit tests to ensure code reliability and performance.
- Contributing to architectural design decisions and code reviews to ensure maintainable and scalable codebase.
- Taking part in software development life cycle, agile methodologies, and version control systems.

Afiniti
Nov 2022 - Jan 2023

Software Engineer II
Islamabad, PK

- Worked as part of the development team for ACDSS backend reporting service.
- Developed and design new features for the service in C++ 17 on Centos 7 linux platform.
- Maintained existing software and fix any new or legacy bugs.

LMKR
Sep 2021 - Nov 2022

Application Designer / Software Engineer
Islamabad, PK

- Worked as part of backend development team for ARIES Petroleum Economics and Reserves Software.
- Developed and maintained new software solutions in C++, Fortran and C#.
- Collaborated in project, from defining technical and user requirements, through to planning, quality and testing.
- Created conceptual architecture and develop solution options that match the clients' requirements.

Bentley Systems
Jul 2019 - Aug 2021

Associate Software Engineer
Islamabad, PK

- Worked as a part of the development team for Bentley's AutoPIPE, which is an advanced software for nuclear piping design and stress analysis.
- Developed and maintained new AutoPIPE features in Fortran 77 and C++.
- Prepared Software Design Specifications for new features.

SKILLS

Programming Languages	Modern C++	C	C#	Python	MATLAB	Simulink
Programming Concepts	Object Oriented Programming (OOP)	Data Structures and Algorithms	Design Patterns
Tools & Technologies	CMake	C++ STL	Git	SVN	MS Visual Studio	Intel Fortran Compiler	Gerrit	Jira	Confluence
Methodologies	Agile	Scrum	Waterfall
Operating Systems	Linux	Windows

EDUCATION

Bachelors of Mechatronics Engineering
Sep 2015 - Jul 2019

National University of Sciences and Technology (NUST)
Islamabad, PK

PROJECTS

Development of a Low-Cost Building Health Monitoring System
Sep 2018 - Jun 2019

- Developed a tilt sensing system using ARM Cortex M3 (primary controller), NodeMCU (open-source IoT platform), and ADXL-PMDZ-355 (accelerometer). Data was displayed on a web and smartphone interface using Thinger.io.

Air Pollution and Noise Monitoring System Using Raspberry Pi
Apr 2019 - May 2019

- Raspberry Pi 3 B+ was interfaced with gas sensors (MQ-135, MQ-7, MG-811) and Python3 was used to program the system. Data was displayed on a web interface using ThingSpeak.

NERC Indigenous Autonomous Arena-Solving Robot
Sep 2017 - Jul 2018

- Designed and programmed an autonomous robot which could localize itself in a given arena. The robot was able to sense obstacles, place objects, follow walls, and follow lines.

PUBLICATIONS

- **Saad Ur Rehman** et al., "IoT-based Accident Detection and Emergency Alert System for Motorbikes," *2021 International Conference on Artificial Intelligence and Mechatronics Systems (AIMS).*