Iqra Noor

Systems/Avionics/Electrical Engineer

Islamabad, Pakistan
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Email
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PROFILE

Results-driven Systems Engineer with 9+ years of experience delivering complex aerospace and defense projects from concept to deployment. Specialized in Model-Based Systems Engineering (MBSE), avionics architecture, platform integration, and systems validation. Proven expertise in translating mission requirements into robust technical solutions aligned with MIL and DO standards. Demonstrated experience across the full technical lifecycle of complex systems, from early design through integration and operational deployment. Adept at leading cross-functional teams, mentoring junior engineers, and driving innovation across engineering lifecycles. Recognized for technical leadership, effective communication, and consistently meeting high-stakes project deadlines in dynamic environments.

SKILLS

- **Technical Skills:** Model-Based Systems Engineering (MBSE) | Systems Design & Integration | Requirements Engineering | Verification & Validation | Safety & Compliance | Avionics Design | Power Compliance | Hardware-in-the-Loop Simulations (HILS) | Configuration Management.
- **Soft Skills:** Analytical Thinking | Technical Documentation & Reporting | Project Management | Attention to detail | Leadership | Adaptability | Communication Skills | Multilingual.

TECHNOLOGIES

C++ | MATLAB | MS Word | Proteus | PSpice | Multisim | Altium | Simulink | Python | LabView | MS Project | Primavera | MS PowerPoint | MS Excel | MS Project | MS Visio | LaTeX.

WORK EXPERIENCE

Team Lead Systems Engineer – NaqCoDE Technologies Pvt Ltd 2024 – Present
Islamabad, Pakistan

- Led system architecture design and avionics integration across multidisciplinary aerospace projects.
- Defined technical baselines, authored key documents (URS, SyRS, SRS, ICDs, CONOPS, TEMP, ATPs), and established traceability across subsystems.
- Led cross-functional teams to deliver high-reliability avionics systems, ensuring seamless interoperability and platform integration.
- Managed technical documentation and configuration control in alignment with ISO and aerospace quality standards.
- Mentored junior engineers, promoting MBSE adoption and fostering innovation through technical workshops.
- Liaised with clients and project managers to align engineering deliverables with operational timelines and regulatory benchmarks.
- Oversaw manufacturing, assembly, and documentation of a 3-DOF rate table designed to simulate roll, pitch, and yaw dynamics of aircraft and UAVs. Contributed to servo motion control system development and ensured alignment with functional and integration requirements.

Global Industrial & Defense Systems (GIDS) 2016 – 2024
Islamabad, Pakistan

Systems Engineer

- Delivered full lifecycle systems engineering outputs (URS, SDS, TEMP, ATPs, trade studies) for missile and UAV platforms.
- Conducted and contributed to technical design reviews (SRR, SDR, PDR, CDR, FTRR, PFTR, FQR).

- Ensured compliance with MIL and DO standards (MIL-STD-704, 810, 461, DO-160), enhancing airworthiness and system reliability.
- Developed project documentation (SOWs, WBS, traceability matrices) to support project planning and control.
- Interfaced with clients, QA, and production teams to streamline Verification &Validation workflows and ensure timely delivery.

Avionics Design Specialist

- Finalized avionics architectures including Power Distribution Units, Flight Control Computers, INS, Servo Drivers, and Telemetry Systems.
- Applied MBSE methodologies to define system functionality, interfaces, and verification plans.
- Conducted SWaP (Size, Weight, and Power) analysis to optimize system design.
- Developed and maintained ICDs; resolved interface-level conflicts across subsystems.
- Led engineering sessions with stakeholders to converge on technical specs and finalize designs.

Test Environment Developer

- Designed and developed test tools and simulators using LabVIEW, C++, and C# for flight line sensor modules and avionics LRUs.
- Engineered HMI-based applications for standalone testing of sensors (INS, FCC, DSC), improving validation efficiency.
- Executed exploratory and scenario-based testing to uncover design flaws under non-nominal conditions.
- Supported QA by automating test sequences and delivering comprehensive reports for qualification campaigns.

Testing & Platform Integration Engineer

- Oversaw bench-to-platform-level testing and integration of advanced avionics on UAVs and missiles.
- Conducted qualification testing (ATPs, ATS) under military standards and compiled detailed test reports.
- Implemented Fault Tree Analysis (FTA) and authored Safety Assessment Reports (SARs) for critical systems.
- Led integration of new weapons with airborne platforms, completing four successful flight trials.
- Collaborated on Hardware-in-the-Loop (HIL) simulations to verify real-time system performance and stability.
- Analyzed data from ground and aerial testing, creating detailed test plans to replicate real-world dynamics and generating qualification reports.

EDUCATION

Bachelor of Science (BSc) – Electrical Engineering 2012 – 2016

Pakistan Institute of Engineering and Applied Science (PIEAS), Islamabad, Pakistan

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AWARDS

- Received Gold Medal Award and Honorary cash prize in FSC (Pre-Engineering) for securing top position in Rawalpindi Board.
