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Education	American University of Ras al Khaimah		August 2021 - September 2025	
	B.Sc. in Mechanical Engineering - Graduated with Honors (Cum Laude), 3x Dean's List		CGPA: 3.65	
Core Competencies	✓ Data Analytics & Visualization (Python, SQL, Tableau, PowerBI)	✓ Project management (MS Project) and cross-functional collaboration	✓ Statistical analysis (Excel, SQL) and predictive modeling (ML) (Python)	
	✓ SolidWorks, AutoCAD, Creo Parametric	✓ MS Office (Excel, Word, Powerpoint)	✓ Research methodology and technical reporting	
	✓ FEA, structural analysis, and design optimization	✓ Process automation and workflow optimization	✓ Quality assurance and safety compliance	
Projects	Ongoing Research: Probabilistic RUL Prediction for Turbofan Engines			
	<ul style="list-style-type: none"><li>Formulating Remaining Useful Life (RUL) prediction as a survival analysis problem using the NASA C-MAPSS dataset, with a focus on Bayesian deep learning for uncertainty quantification.</li><li>Implementing a hybrid CNN-LSTM architecture with Monte Carlo Dropout to estimate both aleatoric and epistemic uncertainty in predictions.</li><li>Engineering physics-informed features (e.g., compressor pressure ratio) and signal processing features (FFT, STFT) to enhance model interpretability beyond raw sensor data.</li></ul>			
	Employing Artificial Intelligence (AI) Filter to Determine 3D Orientation of Objects Using a Non-Contact Approach			
	<ul style="list-style-type: none"><li>Engineered a sensor processing pipeline for an MPU-9250 IMU, implementing sensor calibration and quaternion-based fusion to convert raw accelerometer, gyroscope, and magnetometer data into stable orientation estimates.</li><li>Optimized model performance through feature engineering and EDA on the fused sensor data, achieving a 0.2-degree accuracy in 3D attitude prediction by effectively compensating for sensor noise and drift.</li><li>Deployed a real-time inference framework that delivered these high-fidelity attitude estimates with sub-100ms latency for responsive, closed-loop control.</li></ul>			
	Truck-to-Humanoid Transformation: SolidWorks Design & Structural Analysis			
	<ul style="list-style-type: none"><li>Designed, analyzed, and validated a complex kinematic transformation system in SolidWorks, employing non-linear static, transient dynamic (impact), and high-cycle fatigue simulations to verify structural integrity under extreme operational envelopes.</li><li>Leveraged FEA-driven topology and shape optimization to iteratively refine the design, achieving a 12% reduction in mass while maintaining strict performance and factor of safety requirements.</li><li>Generated comprehensive technical data packages (TDPs) including GD&amp;T-toleranced drawings, bill of materials (BOM), and manufacturing process specifications to ensure first-pass fabrication success.</li></ul>			
	Predictive Maintenance & Operational Efficiency Analysis			
	Led a predictive maintenance project that leveraged data analysis and cross-functional collaboration to transform business operations.			
	<ul style="list-style-type: none"><li>Shifted maintenance from reactive to proactive, reducing unplanned downtime by 29%, cutting maintenance costs by 12%, and improving Overall Equipment Effectiveness (OEE) by 4 percentage points across key KPIs.</li><li>Developed a multi-tool workflow combining Python (Hybrid CNN-LSTM modeling, feature engineering on sensor data and maintenance logs), SQL (exploratory data analysis), and Tableau/Power BI (interactive dashboards).</li><li>Applied mechanical engineering domain knowledge to enhance model accuracy and deliver robust, actionable predictions for optimized maintenance scheduling.</li></ul>			
	Experience	Al Turath Engineering Consultancy		May 2025 – July 2025
		Mechanical Engineering Intern		Dubai - United Arab Emirates
		<ul style="list-style-type: none"><li>Coordinated with cross-functional teams to optimize MEP AutoCAD designs, reducing resource usage by 15%.</li><li>Assisted in HVAC load calculations using HAP, streamlining design approval by 10%</li><li>Conducted site visits and provided operational feedback, improving mechanical system installation procedure</li></ul>		
ADNOC		June 2024 - July 2024		
	Wireline Services Maintenance and Quality Specialist Intern		Abu Dhabi - United Arab Emirates	
	<ul style="list-style-type: none"><li>Managed and optimized 40+ wireline service tools, reducing downtime by 17%.</li><li>Implemented process improvements, boosting operational efficiency by 20%.</li><li>Ensured safety compliance with zero incidents during the internship period.</li></ul>			
	AURAK		August 2022 - August 2024	
	Research Assistant		Ras al Khaimah - United Arab Emirates	
	<ul style="list-style-type: none"><li>Led research projects, ensuring adherence to deadlines and improving data collection accuracy</li><li>Coordinated collaborative work environments and provided technical support to enhance project outcomes</li></ul>			
Certifications	Certified Member of ASME		Data Analytics Professional Certification	
	American Society of Mechanical Engineers		Google	
	AI for Mechanical Engineers Specialization		Machine Learning with Python	
	University of Michigan		IBM	