

<div><div>Mandeep Singh</div><div>C# .NET React Full Stack</div><div><div><div><div></div></div><div>Gurgaon, Haryana</div></div><div><div><div></div></div><div>+91-7827925210</div></div><div><div><div></div></div><div>mandeep.co.747@gmail.com</div></div></div></div>											
Profiles	<div><div><div><div></div></div><div>Mandeep Singh</div></div><div><div><div></div></div><div>Mandeep (Linktree)</div></div><div><div><div></div></div><div>Mandeep (Portfolio)</div></div></div>										
Summary	<p>I'm the kind of person who can't walk past a problem without trying to fix it – whether it's reviving a burned-out national lab instrument or building tools that save IT teams from endless manual work. I'm a software engineer who loves turning “this is too complicated” into “why didn't we do this sooner?”</p> <p>From securing medical devices (because hackers are no joke) to making surgical workflows less of a headache for doctors, I've always been drawn to work that makes a real difference. I'm that person who gets weirdly excited about automating repetitive tasks or finding clever ways to make systems more reliable.</p> <p>Outside of work, I'm still the same guy who once led a team of 150 to pull off a college fest – which basically means I can herd cats, manage chaos, and get people excited about a shared goal. These days, I channel that energy into mentoring junior engineers and geeking out over tech that's not just smart, but also sustainable.</p> <p>At the end of the day, I just love building things that work – and work well.</p>										
Experience	<div><div><div><div><div>Dell</div><div>Senior Software Engineer</div><div><div><div></div></div><div>https://www.dell.com/en-in</div></div></div><div><div><div></div></div><div>Dell Remediation Scripts</div><div><div><div>Contributed to the Support Assist Remediation platform, collaborating on over 100 remediation scripts. These scripts addressed critical issues such as BSOD (Blue Screen of Death), thermal events, audio malfunctions, and other system instabilities. The impact of this work was significant, improving device reliability and reducing customer support costs</div><div>Scripts were packaged as a premium feature, directly contributing to \$15M in revenue by addressing widespread customer pain points.</div></div></div><div><div><div></div></div><div>Dell Chrome OS Telemetry Platform</div><div><div><div>Led end-to-end development of a telemetry aggregation system for Chrome OS devices, designing scalable backend architecture and RESTful microservices.</div><div>This initiative aimed to provide insights into device performance and health, enabling proactive issue resolution and better product enhancements.</div></div></div><div><div><div></div></div><div>Driver/BIOS Deployment Automation Tool</div><div><div><div>Engineered a depot-facing application to automate device-specific Driver/BIOS updates, reducing manual configuration time by 40% and standardizing workflows across 12 global service centers.</div><div>Accelerated large-batch device programming by 3.2x, enhancing depot throughput and reducing firmware-related service recalls by 18%.</div></div></div></div></div><div><div><div><div><div>Stryker</div><div>Software Engineer</div><div><div><div></div></div><div>https://www.stryker.com/in/en/index.html</div></div></div><div><div><div></div></div><div>Cloud Data Extraction & Parser Development</div><div><div><div>This project required the maintenance and development of cloud data parsers that extracted meaningful information from raw data uploaded by devices. For teams that wanted to use the solution on their devices, it was necessary to comprehend the data and create new data parsers. Because this project was used by internal teams to improve their workflows, it had an indirect but significant impact on the company.</div><div>Delivered custom parser solutions for 12+ device categories, reducing data processing time by 35% and accelerating feature deployment cycles.</div></div></div><div><div><div></div></div><div>Medical Device Cybersecurity Overhaul</div><div><div><div>The project was to improve the security of the medical devices as well as the software solution that connected them to the cloud. To accomplish this, extensive research on cryptography, public key infrastructure, and certificates was carried out. I was able to implement a super secure licensing system for the devices after investing 3+ years in it, including designing the solution from scratch to company-wide deployment.</div><div>Deployed a zero-trust licensing system that reduced cyberattacks by 90%, preventing potential losses exceeding \$8M annually in breach-related costs.</div></div></div><div><div><div></div></div><div>Operating Theater Integration Platform</div><div><div><div>Interconnected devices in an operating theater to make it easier for doctors to use. Understanding of low-level protocols was developed to allow devices to communicate wirelessly with one another and be controlled by a single master device.</div><div>Eliminated 15+ manual workflow steps for surgeons, improving procedure efficiency by 25% despite limited direct revenue impact.</div></div></div><div><div><div></div></div><div>Sustainable Medical Device Reprogramming Solution</div><div><div><div>A software solution for reprogramming RFID tags for medical devices was developed in a short but impactful project. The data for these tags was managed in a backend SQL server and reprogrammed after the devices were sanitized for reuse. This solution not only saved the company money but also contributed to the company's sustainability efforts by reducing medical waste.</div><div>Contributed to \$2.1M in annual savings and a 15% reduction in device waste, aligning with corporate ESG sustainability targets.</div></div></div></div></div><div><div><div><div><div>Stryker</div><div>Intern</div><div><div><div></div></div><div>https://www.stryker.com/in/en/index.html</div></div></div><div><div><div></div></div><div>Medical Device Cloud Connectivity Optimization</div><div><div><div>Redesigned legacy medical device cloud integration platform, implementing secure remote firmware updates (HTTPS/MQTT) and bidirectional RPC capabilities to enable over-the-air configuration changes.</div><div>Eliminated 85% of onsite service visits by sales teams, achieving \$1.8M in annual operational savings while supporting 2,400+ connected devices across 100+ hospital networks.</div><div>Introduced version control and rollback features, reducing device downtime during updates by 70% and strengthening compliance with FDA 21 CFR Part 11 guidelines.</div></div></div><div><div><div><div><div>National Physical Laboratory</div><div>Intern</div><div><div><div></div></div><div>https://www.nplindia.org</div></div></div><div><div><div></div></div><div>Precision Instrumentation Engineer</div><div><div><div><div>Revitalized Critical National Infrastructure: Spearheaded emergency repair of India's primary reference-grade goniophotometer (360° light measurement system) after catastrophic motherboard failure, preserving the nation's SI-compliant luminous intensity calibration capabilities.</div><div>Custom NI-Based Control System: Engineered a National Instruments (NI) DAQmx/LabVIEW solution to replace legacy hardware, developing:<div><div>Automated 3-axis motion control system with <0.1° positioning accuracy</div><div>Traceable photometric data acquisition framework compliant with BIPM standards</div><div>Self-diagnostic routines reducing future maintenance downtime by 60%</div></div></div><div>Enhanced Metrological Performance: Achieved 0.3% measurement uncertainty (improved from 1.2% in legacy system) through algorithmic optimization of spatial response correction factors.</div><div>Strategic Industry Impact: Restored calibration services for 17+ major lighting manufacturers (including Havells and Philips India), preventing estimated ₹420M in annual industry losses from uncalibrated products.</div></div></div></div></div></div><div><div><div><div><div>Thapar University</div><div>Electronics Instrumentation and Control</div><div>7.97</div><div><div><div></div></div><div>https://www.thapar.edu</div></div></div><div><div><div></div></div><div>Leadership & Organizational Experience</div><div><div><div><div><i>(Bachelor's Degree Activities)</i></div><div><div><div><div>Cultural Fest President: Directed a 150+ member team to execute a 5-day festival with 3,000+ attendees, managing ₹8L+ budgets, vendor negotiations, and cross-departmental coordination.</div><div>Skill Development: Cultivated strengths in conflict resolution, agile prioritization, and stakeholder communication—later applied to technical team leadership in professional settings.</div><div>People Operations: Mentored 20+ society members across event planning, marketing campaigns, and finance tracking, improving team retention by 40% year-over-year.</div></div></div><div><div><div><div><i>While not directly technical, this experience shaped my approach to collaborative problem-solving, deadline-driven execution, and aligning diverse teams toward shared goals—skills I actively apply in technical leadership roles.</i></div></div></div></div></div><div><div><div><div><div>Thapar University</div><div>Electronics Instrumentation and Control</div><div>7.23</div><div><div><div></div></div><div>https://www.thapar.edu</div></div></div><div><div><div><div>This was in project based Masters Degree, where almost I spent my second year working at Stryker. I did participate in some activities, but this time I was more focused on learning real world skills. Also, worked as teaching assistant in the first year of Masters.</div></div></div></div></div></div></div><div><div><div><div><div>Inventory Management (React)</div><div>Created an inventory management app for small scale industry</div><div>It almost managed all the materials in the stock yard, on the display items and also took care of low stock alerts and profit calculations.</div></div></div></div></div><tr><td>Skills</td><td colspan="2"><div><div>C#</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div><div><div>.NET</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div><div><div>SQL</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div><div><div>ASP.NET</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div><div><div>Microservices</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div><div><div>Docker</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div><div><div>Kubernetes</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div><div><div>Azure</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div><div><div>PKI</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div><div><div>React</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div></td></tr><tr><td>Interests</td><td colspan="2"><div><div>Swimming</div><div>Cooking</div><div>Gadgets</div></div></td></tr><tr><td>Languages</td><td colspan="2"><div><div>English</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div><div><div>Punjabi</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div><div><div>Hindi</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div></td></tr></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div>		Skills	<div><div>C#</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div> <div><div>.NET</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div> <div><div>SQL</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div> <div><div>ASP.NET</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div> <div><div>Microservices</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div> <div><div>Docker</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div> <div><div>Kubernetes</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div> <div><div>Azure</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div> <div><div>PKI</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div> <div><div>React</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div>		Interests	<div><div>Swimming</div><div>Cooking</div><div>Gadgets</div></div>		Languages	<div><div>English</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div> <div><div>Punjabi</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div> <div><div>Hindi</div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div></div>	
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