SREO DEBNATH

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EDUCATION

University of Calgary   2020 – 2026 April
Bsc. In Software Engineering   G.P.A – 3.02
Dean's List (2020-2021), Entrance Scholarship 2020

EXPERIENCE

Automation Engineering Student   Jan 2024 – Apr 2025
CNRL, Kirby & Jackfish, AB
- Developed custom desktop applications using C# Forms and SQL Server Management Studio (SSMS) to handle large datasets, improving data management and operational efficiency. Utilized SQL relationships to optimize data queries and ensured seamless communication between the application and databases.
- Integrated real-time data into desktop applications using Kepware and OPC tags, enhancing system responsiveness and real-time monitoring.
- Designed, coded, and debugged software for real-life industrial automation applications, implementing security measures to protect sensitive information.

INTERNSHIP PROJECTS

Carseal Application – Safety Compliance & Notification System
- Developed a Windows-based C# application to replace paper-based carseal tracking, introducing role-based access (Operator, Team Lead, Foreman, Auditor) and a secure SQL Server backend.
- Implemented a multi-step approval workflow with automated email notifications via local SMTP server, ensuring traceable authorization from request to final audit.
- Integrated Excel data import for seamless legacy data migration and built admin tools for user management, dropdown customization, and re-sending failed notifications.
- Enhanced compliance and audit readiness by centralizing records, enforcing digital accountability, and enabling advanced search and filter functionality for users.

Lab Data Interface – Real-Time OPC Monitoring System
- Built a data interface that connects to Kepware using OPC tags to pull and display real-time lab sample data.
- Included immediate feedback and validation to ensure input data matched live system readings.

Live Database – DeltaV Graphic Rebuild Tracker
- A Created a full-featured application to track and manage work associated with rebuilding DeltaV HMI graphics across multiple units.
- Developed relational database architecture using SQL Server to link graphics, units, and rebuild statuses
- Added UI features for real-time progress updates, search, and filtering to aid engineers and project managers in prioritizing work.

CAPSTONE PROJECT

- Refactored a legacy 10Gb Ethernet MAC from Verilog to Chisel, creating a modern, modular IP core ready for new feature integration.
- Implemented a 10GBASE-R Physical Coding Sublayer (PCS) in Chisel, enabling compatibility with commercial ASICs and standard SERDES hardware.
- Validated the modernized core by developing a back-to-back simulation test bench and demonstrating full functionality on an FPGA system.

TECHNINCAL SKILLS

- **Languages:** C#, C#.Net, Python, Java, SQL, CSS, HTML, JavaScript, React JS, Node.JS, C, C++, Visual Basic(concepts), Jupyter Notebook
- **Technologies:** Linux, Visual Studio, GitHub, SolidWorks, Kepware, Matplotlib
- **Data & Analysis:** Pandas, NumPy, Power BI, Excel, Access, SQL Server (SSMS), PostgreSQL, Oracle, Azure