Aniket Goyal

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SUMMARY OF QUALIFICATIONS

Concepts: Simulink, Data Structures, Algorithms, Object- Oriented Programming, Microcontrollers
Languages: Java, Python, C++, HTML, CSS, SQL, PLC Ladder Logic, SPEL
Applications: Microsoft Excel, Teams, PowerPoint, Outlook
Technologies: Microsoft Azure, GIT, VS Code
Design: NX, SolidWorks, Canva, Figma

EDUCATION

Ontario Tech University – Oshawa, ON, Canada **Sept 2019- April 2023**

- Mechatronics Engineering, BEng (Hons) with minoring in AI and Machine Learning

Relevant Coursework: Circuit Design, Industrial Automation, AI and Machine learning, CAD, Robotics and Automation, Control systems, Actuators and Power Electronics, Mobile Robotics, Sensors and Instrumentation, Mechatronics Design, Real-Time Embedded Systems, Intro to Programming, Object Oriented Programming.

WORK EXPERIENCE

Junior Application Engineer- Wenglor Sensoric Group Canada Inc. **June 2023- Present**
Mississauga, ON, Canada

- Collaborated with end-users, OEMs, and distributors to understand their needs and challenges in using **machine vision cameras** and **2D, and 3D profile sensors**, resulting in a **20%** increase in customer engagement.
- Conducted demos and **testing** of advanced machine vision technologies for automated inspections in diverse industries, including Food and Beverage, Automotive, and Packaging. This contributed to improved accuracy, productivity, and process efficiency.
- Developed and curated **engaging content** on sensors for promotion on LinkedIn and other social media platforms, showcasing product features, benefits, and real-world applications, leading to a **200%** increase in online engagement and a **25%** rise in sales inquiries.
- Developed and delivered customized training programs for sales teams, enhancing their knowledge of vision cameras and profile sensors and improving overall service quality.
- Worked closely with product development teams to provide feedback on vision cameras and profile sensors, leading to the introduction of three new features that improved product performance and usability.
- Managed multiple projects, including OCR code recognition and **automated defect detection** using vision cameras, and implemented software modules like pattern matching to solve complex applications.
- Utilized **CRM software** to manage customer relationships, monitored and reconciled accounts for financial accuracy, and efficiently handled **RFQs,** resulting in enhanced customer satisfaction and increased business opportunities.
- Provided pre-and post-sales **technical support** for vision cameras and profile sensors, ensuring a smooth adoption process for customers, and reducing support tickets by **20%**.

Technical Services Assistant- Ontario Tech University **Sept 2022- April 2023**
Oshawa, ON, Canada

- Demonstrated a strong understanding of studios' techniques and protocols and followed strict safety guidelines to ensure a safe working environment.
- Provided training and support to students and researchers in the use of mechatronics equipment such as **oscilloscopes and robot arms** leading to a **10%** improvement in user satisfaction and proficiency.
- Conducted **quality checks** on 3D-printed products to ensure they met the **design requirements** resulting in positive feedback and better student turnout.
- Collaborated with senior staff to develop **efficient workflows** and identify areas for process improvement in the lab, resulting in the successful completion of multiple lab projects.
- Demonstrated an ability to work effectively as part of a team, establishing positive working relationships with colleagues across the lab.
- Developed and optimized detailed **3D CAD** models for lab designs and equipment, successfully improving student project outcomes.

Research Office Assistant - Ontario Tech University **Sept 2022- April 2023**
Oshawa, ON, Canada

- Analyzed university's research contracts to enter into legal suits management platform resulting in reducing risk and improving day-to-day operations.
- Utilized **HTML** and **CSS** by creating high-quality social media content for the department resulting in better student engagement.
- Formulated meetings and partnerships between the Vice President of Research and Innovation and donors.
- Managed the university's research page using **cascade CMS** allowing easy maintenance and quick deployment.
- Created **Campaigns** on research data management for the university's social media handles- Twitter, LinkedIn which led to higher impact numbers.

PROJECTS

PLC Based Box Sorting and Manipulation System– Ontario Tech University **Jan 2023-March 2023**

Ladder Logic, Factory I/O

- Designed and developed a PLC-based box sorting and manipulation system for an industrial environment that received boxes from an upstream conveyor and sent them down to a packaging machine.
- Developed the PLC program using **Ladder logic** and utilized **Factory I/O software** for Control Prototyping in a virtual simulation environment to **simulate the process** and test the program's functionality.
- Designed the conveyor system using SolidWorks for the objects to travel from one place to
- Integrated sensors and actuators into the system to ensure precise box sorting and manipulation resulting in a more effective industrial system.

Autonomous Search and Rescue Robot – Ontario Tech University **Sept -December 2022**

C++, Microcontroller (Arduino), Git, Control theory

- Developed and implemented an autonomous maze navigation algorithm in **C++** utilizing a depth-first search approach and a **PID** wall follower to prevent collisions, resulting in accurate and collision-free maze solving on a physical robot.
- Programmed the robot to navigate autonomously in a 2-level maze to rescue a miner.
- Utilized different sensors such as **ultrasonic, time of flight, and infrared** to get the distance and fed it to the algorithm which makes decisions based on the data from the sensor.
- Conducted **Failure Modes and Effects Analysis (FMEA)** on multiple robot designs, identifying and mitigating potential failure points and resulting in optimal solution and robot design robustness.
- Worked on functional decomposition efforts, created detailed **engineering specifications** for the project, designing **accurate circuit diagrams** and ensuring efficient team coordination, and project's timely and successful completion.

Robot Pick and Place and Inspection using vision system- Ontario Tech University **Sept- December 2022**

EPSON robot, SPEL$^+$, Calibration, Robot Controller

- Performed efficient pick and place operation and part inspection process, by successfully integrating the **vision system** with the EPSON Pro Six PS3 robot.
- Calibrated the vision system by teaching six points using **fixed downward calibration**, enabling the EPSON Pro Six PS3 robot to accurately identify coordinates of randomly placed objects on a conveyor.
- Programmed the robot using the RC+ control system and SPEL+ language, utilizing "VRun" to execute vision sequences, and "VGet" to fetch coordinates of points.
- Utilized an IR sensor to dynamically control conveyor ON and OFF states, optimizing robot operations.

I Talent – **TH.0 Hackathon 2022** **June 2022**

HTML, CSS, Python

- Ranked **2nd** Overall- The best idea with a proper business plan.
- Designed and developed a job search platform prototype and talent marketplace for international students using **HTML, CSS, and Python**, applying user-centered design principles and **agile methodologies** to create a responsive and visually appealing website.
- Targeting **200,000+** students annually and aiming to break even within the first two years of launch, this project demonstrated skills in **product design**, **project management,** and **business planning**.
- Built with a mission to bridge the employment gap for international students and help them build meaningful careers in a new country.

LEADERSHIP EXPERIENCE

Globalink Mentor- Mitacs Inc **April 2023 - June 2023**

Toronto, ON, Canada

- Enabled undergraduate students from across the world to develop their research goals, plans, and troubleshooting abilities, leading to successful project completion and academic growth.
- Facilitated a positive and **productive research environment** for students, leading to successful project outcomes and enhanced academic and professional growth.
- Strengthened **mentoring skills**, led to improved student outcomes, and established a culture of continuous learning, leading to successful project outcomes and academic achievements.
- Helped students make informed decisions about their academic and professional futures, leading to successful graduate school applications, career advancements, and research opportunities.

Outreach Lead– Enactus Ontario Tech **Aug 2022 – April 2023**

Oshawa, ON, Canada

- Planned monthly skill-oriented workshops on AI used for business, financial literacy, community development**,** entrepreneurship, and company reviews leading **to 100%** more-member engagement.
- Increased the enthusiasm of the team by developing new outreach initiatives such as building partnerships with high schools, and Ontario Tech Talent thereby continuously allowing them to innovate and find new gaps in the market that needed to be addressed.
- Received Project Accelerator funding for the Project from RBC, Scotia, and HSBC worth **3000 CAD** which helped in growing the size of the project and the day-to-day operations.

INTERESTS

Research | Software | Automation | Podcasts | Startups | Leadership| Product Design | Community Involvement