## Kritan Aryal

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# karyal10.github.io

#### **EDUCATION**

## The University of Toledo

**Anticipated Graduation Date: Dec 2025** 

Bachelor of Science: Computer Science

**GPA: 3.82** 

- President's List (2021-2024), Dean's List (2021-2024), Russell J. Ebeid Scholar (2023-2025)
- Certifications and Leadership: Dale Carnegie (2022), Six Sigma: Green Belt (2023), NSO Secretary (2023-2024)

#### **RELEVANT PROJECTS**

#### **Desk Robot** – Python (2024)

 Created an interactive desk robot using Micro:bit and Python, featuring advanced functionalities such as temperature sensing and radio communication. Also, implemented functions to maintain a state of contentment with continuous interaction, display frustration based on gesture, and offers a fully functional Snake game.

## **ReEdu**– HackPrinceton(2024)

• Developed a lecture summarization platform using WhisperAI to encourage student comprehension and facilitate quick assessment of student understanding, emphasizing tailored teaching approaches satisfying student needs.

#### Smartcash – HackPSU (2024)

• Created a website using React, Python, and MongoDB to develop a budgeting tool that predicts future balances and warns if balance is projected to go negative, highlighting expertise in AI integration, and database management.

## Airline Reservation System – Python (2024)

• Implemented a comprehensive Airline system, facilitating functionalities such as seat reservation and cancellation, reservation detail search, seat availability display, and waitlist with distinct function for both admin and guest users.

## Personal Website – React, HTML, CSS (2023)

• Created a personal website using React, featuring comprehensive information about my background, projects, and resume demonstrating proficiency in web design, front-end development, and content presentation.

#### Amusement Park Simulation – Data Structure (2023)

• Engineered an innovative Amusement Park Simulation in Java, meticulously modeling rides, visitor behavior, and park operations from dawn till dusk, demonstrating knowledge in system simulation and advanced data structures.

## Tower of Hanoi – Data Structure (2023)

• Created an efficient algorithm in Java, highlighting strong recursion proficiency resulting in the solution that elegantly addresses the puzzle's challenge, demonstrating a clear understanding of algorithmic principles.

## **EXPERIENCE**

## Software Engineering Intern - First Solar Inc.

May 2024 - Present

- Led the transformation of the ScrapStation webapp, modifying dot net and related NuGet packages with a new process ordering logic which resolved issues of running processes twice and eliminated process-related scrap issues.
- Addressed critical ScrapStation bugs by prioritizing configuration retrieval to prevent null value comparison, integrating
  dropdowns with loading animation to prevent value resets, and incorporating hash keys to resolve cache problems.
- Effectively executed remote server updates, conducting meticulous software installations, reboots, and service restorations, while constantly monitoring rework, resulting in successful completion of a server patch.
- Developed a highly efficient navigational menu with Ignition for MES Dashboards, consolidating all dashboard resources into a single platform, resulting in easier accessibility for critical data and improved user experience.
- Created and integrated new pages into various web applications using Ignition, ensuring alignment with design requirements and seamlessly incorporating data from provided tags.
- Developed a stored procedure and job in SSMS to monitor job executions, identifying and notifying the team of any job failing three consecutive times, significantly improving error tracking and team responsiveness.
- Consistently resolved numerous tickets each week, which included tasks such as modifying/updating/creating tables and data, history tables, triggers, data custodian tasks, and handling other database management responsibilities.

## **Engineering Intern - First Solar Inc.**

## August 2023 - April 2024

• Built a Python program to automate the retrieval of warehouse stock reports from Oracle and order parts accordingly using selenium form web scraping, leading to 90% improvement in parts availability and 83% reduction in downtime.

- Developed specialized JMP scripts for edge seal dispenser visualizing data from SQL, delivering precise shot weight and ratio of each nozzle head, including control limit and specification limit, resulting in accurate data accessibility.
- Boosted module data retrieval speed by 3 times by integrating a SubID search feature in FIN1 JMP script.
- Debugged and revitalized 10+ scripts, rescuing valuable codes ensuring seamless compatibility with newer versions.
- Conducted a DMAIC analysis to address low throughputs during shift changes using fishbone and 5 Whys methodologies to identify bottlenecks and implemented targeted solutions to achieve a 14% increase in throughput.
- Engineered specialized tools using SolidWorks to ensure worker safety when cleaning automated machines, creating a safer workspace, and mitigating the risk of work-related accidents and promoting a culture of safety-first.

## **Engagement Ambassador - The University of Toledo Foundation**

**September 2021 – May 2022** 

- Initiated effective communication with university alumni, conducting surveys that resulted in a 20% increase in participation and a 15% boost in contributions to the foundation, fostering a stronger sense of community support.
- Demonstrated strong teamwork, and communication playing a pivotal role in conducting a successful fundraising campaign, raising \$1.9 million during the Giving Day, surpassing previous year's total by 46%.

## **RELEVANT SKILLS**

Language/Framework: Python, Java, JavaScript, C, C#, C++, React, Angular, Express, .NET, Swift, Gulp, HTML, CSS Related: MATLAB, Power BI, Ignition, SQL Server Management Studio, Visio, Git, Presto, JMP, Minitab, Visual Studio Industry Skills: Statistics, Design of Experiment, Scrum Agile, FMEA, Root Cause Analysis, Control Plans, DMAIC