**Girik Soni**

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**EDUCATION**

University of Wisconsin-Madison | Madison, WI May 2023

Bachelor of Science: Computer Science, Data Science

• Relevant Coursework:OOP, Data Structures and Algorithms, AI, Computer Engineering, Statistics, Operating Systems and Embedded Systems, Database Management Systems

**SKILLS**

**Languages**: Java, R, Python, JavaScript, HTML/CSS, Swift, SQL, C, C++, C#, Bash, Shell, Unix, Dart

**Other Technical Skills:** Embedded C/C++, IaaS, .NET, Git, Linux, PyTorch, Tensorflow, React, AWS, Agile, REST APIs, Travis, SOAP, JSON, Tableau, Debian, Kubernetes, Jenkins, Google Cloud, Ansible, Docker, Helm Charts

**COMPUTER SCIENCE EXPERIENCE**

**WisDOT – Bureau of Structures**| Madison, WisconsinMay 2022 - Sep 2022

Full Stack Developer & Automation Engineering Intern

* Led development and deployment of an application using the MVC framework which transforms the certification process for bridges and vital structures across Wisconsin. Utilized **Java, C#**, and databases (**Oracle, Access**) to optimize the process and reduce certification time by over 70% showcasing ability to work in a fast-paced environment and deliver results on time.
* Executed advanced **SQL** queries to automate the certification process, resulting in improved efficiency and accuracy for structure certification around Wisconsin. Worked with relational SQL databases to design efficient data models and support data-driven features.
* Collaborated with cross-functional teams, including product managers, civil engineers, and other developers, to ensure the software meets high-quality standards and business requirements.

# Wisconsin School of Business | Madison, WI Jan 2022 - May 2022

NLP Research Intern

* Conducted research on candidate behavior during interviews, employing **AI**, **machine** **learning** and **NLP** techniques to analyze video transcripts and extract valuable insights.
* Contributed to an ongoing research paper aimed at improving text analysis models by applying clustering algorithms and visualization techniques (**pyLDAvis, gensim**).
* Worked in a team of researchers to implement **computer vision** to classify postures.

**PERSONAL PROJECTS**

**Unix Shell (C, POSIX APIs)** March 2023

Engineered a fully functional **UNIX** shell from scratch, supporting advanced features such as command execution, **I/O** redirection, and background processes. Showcased proficiency in **bare metal C** programming and developed deep understanding of the interaction between firmware and electronics.

# Autonomous Wireless Piano System Development Sep 2022

Developed a wireless piano keyboard system with **Raspberry Pi 4** and a **NoIR** sensitive camera. Leveraged **OpenCV** for real-time tracking of key presses via **IR** light reflection. Integrated **MIDI** processing with **RtMidi** to generate corresponding sounds. Implemented a Bluetooth protocol for reliable signal transmission from the keyboard. Ensured system optimization for real-time performance and minimal latency.

# InstaGram Clone (Flutter, Firebase) Jan 2022

Developed a cross platform social media app similar to Instagram using the Flutter framework. Implemented user authentication, image uploading, etc. Programmed in **Dart**, and utilized **Firebase** for backend services ensuring seamless user experience and efficient data management.