JAI SINHA

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EDUCATION

University of Wisconsin–Madison, Madison, WI — Expected Graduation: May 2025

Bachelor of Science, Computer Science

Related Courses: Linear Algebra, Applied Statistics, Programming I–III, Computer Engineering, Computer Graphics, Machine Organization, Algorithms, Artificial Intelligence, Big Data, Database Implementations

EXPERIENCES

Tesla, Palo Alto, CA — May 2024 – Aug 2024

Software Engineering Intern, Manufacturing Test Engineering (HV Battery)

- Used Go routines to remodel tester data upload process, reducing cycle time by over 10% and preventing massive data losses from occurring on manufacturing lines
- Led Go software development for major new tester, communicating with Battery and Firmware teams to ensure full coverage of a detailed task plan, delivering 11 test states well ahead of deadlines
- Created tool to individually validate all functionalities of off-the-shelf hardware used in tester, using go channels to pass messages through a web socket between the Go backend and React UI frontend
- Worked closely with Firmware team to bring 20+ new functionalities to widely shared toolset abstracting CAN messages and parsing bit-level payloads

Tesla, Palo Alto, CA — May 2023 – Aug 2023

Software Engineering Intern, Manufacturing Test Engineering (Residential Energy)

- Developed LabVIEW software for high-volume tester, shortening tester duplication process by 30+ minutes, and supported debugging and error analysis across a 15-hour time zone difference
- Automated data acquisition setup by creating LabVIEW-based driver using NI DAQmx libraries, and added support for XML configuration files to further simplify the setup process
- Supported 50+ hours of tester pre-ship software validation and hardware troubleshooting, learning to solder, read wiring diagrams, use digital multimeters, and coordinate with other teams
- Created template dashboard using internal SQL-based tools to visualize tester performance based on metrics such as overall yield, pareto failure analysis, and more, with process duplicatable across 1000s of testers

EXTRACURRICULARS

Wisconsin Racing Formula SAE Team, Madison, WI — Sept 2021 – May 2023

Team Member, Firmware

- Firmware debugging, Python front and backend developing for Raspberry Pi-based steering wheel display using TKInter and Multiprocessing libraries

SKILLS & INTERESTS

- **Languages:** Go, Java, C, C++, Python, JavaScript, React, Bash, SQL, R
- **Tools:** Git, VS Code, RStudio, PyTorch, Spark, Docker
- **Concepts:** Object-Oriented Programming, Machine Learning, Algorithms, Firmware, Test Engineering
- **Interests:** Cars, *The Alchemist*, Formula One, Cooking, *Jacksonville Jaguars*, Photography