Rohan Singh

rohan.singh.do@gmail.com | linkedin.com/in/rohan-singh1122 | github.com/rohxnsxngh

EDUCATION

BSc. Mechanical Engineering; Minor: Computer Science Aug 2019 - Dec 2023 Texas A&M University
Coursework: SolidWorks Design; Solid Mechanics in Mechanical Design; Dynamic Systems and Controls; Dynamics and Vibrations; Thermofluid Systems; Bio-inspired Robotics; Machine Learning; Compressed Air Systems; Heat Transfer; Thermodynamics.

WORK EXPERIENCE

TOYOTA | Software Systems Engineer I — Plano, TX | Aug 2023 - Current

- Developed and maintained software applications for in-vehicle infotainment systems, enhancing user experience and delivering features such as navigation, entertainment, and connectivity.
- Led software integration efforts, facilitating seamless communication between various vehicle components, including sensors, ECUs, and telematics modules, optimizing system performance.
- Conducted system-level testing, validation, and troubleshooting to identify and resolve software defects, resulting in improved software quality and reduced production delays.
- Demonstrated proficiency in programming languages such as C/C++ and Python, as well as familiarity with real-time operating systems (RTOS) like AUTOSAR.

TESLA | Software Engineer Intern — Austin, TX | May 2023- Aug 2023

- Automated and optimized Revit model extraction, reducing manual tasks from 12 hours to minutes and processing 20-25 Revit models in 50 minutes, all while maintaining scalability and cost-efficiency.
- Developed a robust, user-friendly tool featuring automatic synchronization, error logging, persistent background jobs, and a custom frontend with real-time status updates on the Revit extraction tool, enhancing accessibility and transparency for users.
- Employed alternative to Autodesk Forge Flex tokens for cost-effective operation, managing expenses at $30/day per token, resulting in potential annual cost savings ranging from $163,800 (15 tokens) to $491,400 (45 tokens) for minimal usage, while ensuring scalability with increased factory projects.
- Assisted development of a cutting-edge tracking service utilizing Golang and leveraging the Ericsson network's 5G capabilities to monitor and optimize the real-time movements of AGVs, cranes, vehicles, and other assets, enhancing operational efficiency and asset management.
- Provided comprehensive frontend development support using ReactJS, Python, and Deck.gl to visualize the data extracted by the Revit extraction tool, seamlessly transforming it into GeoJSON format and rendering it in a dynamic 3D display, enhancing data visualization and user interaction.

TESLA | Software Engineer Intern — Austin, TX | Jan 2022 – Sept 2022

- Collaborated with software engineers to develop and test application procedures for system efficiency.
- Assisted in implementing a project tracking system that has tracked over 30,000+ scopes worth over $300 million across GigaTexas from start to finish. This system tracks labor, reports spending, forecasts for funding, and has project controls in place to identify work at risk.
- Developed dashboards, reports, and other tools that provide visibility and transparency to project productivity, progress, changes, and KPI to ensure alignment with project goals by utilizing web development and embedded Power BI.
- Assisting the Texas Giga Factory BIM team who is responsible for managing the digital model and data representations of the factory and its productions assets used by engineering, construction, manufacturing, and operations teams.
- Providing design and construction coordination services aimed at maximizing constructability, safety, maintainability, and future factory expansion options. Implementing myriad of technology and processes used to maintain all factory models and their associated data in as close to real-time as possible.
- Using LIDAR scanning and reality capture with Cintoo to map the factory and resolve clashes.

Nvidia| Computer Aided Design Engineering Intern — Austin, TX | May 2021 - August 2021

- Developed and implemented C++ scripts to automate tasks within CAD software, improving efficiency and productivity by 15%.
- Applied Geometric Dimensioning and Tolerancing (GD&T) principles to ensure accurate representation of tolerances and dimensions in CAD models and drawings.
- Incorporated Design for Manufacturability (DFM) principles into CAD design processes, optimizing designs for efficient and cost-effective manufacturing.
- Built detailed 3D models of equipment and data center layouts utilizing industry-standard 3D CAD software, including Creo, Windchill, SolidWorks, and Fusion 360, ensuring precision and adherence to project specifications.

SKILLS

Languages: Python, Javascript, C#, Golang, C++, Java, Typescript, MATLAB, SQL, JQL
Tools & Technology: NodeJS, ASP.NET core, GraphQL, MongoDB, Unity, PostgreSQL, Redis, ReactJS, VueJS, Git, Docker, ThreeJS, WebGL, DeckGL, Microsoft SQL Server, MySQL, Amazon Web Services (AWS), Firebase, Ubuntu Linux, MATLAB
CAD Software: SolidWorks, Autodesk Inventor, Autodesk Fusion 360, Autodesk Revit, CATIA, Creo