SAWAN KUMAR DAS

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WORK EXPERIENCE

TCS | SYSTEM ENGINEER   Bengaluru, India | Apr 2024 – Present

- Modernized the legacy frontend of US Bank's financial platform by migrating to React.js, Context API, SCSS, and JavaScript, and delivering end-to-end implementation through **CI/CD pipelines (Jenkins)** integrated with a **microservices-based architecture** to enhance **scalability and release velocity.**
- Achieved **95% unit test coverage** and reduced **bugs/code smells by 90%,** validated through **SonarQube** reports.
- Optimized UI rendering performance by applying component composition, minimizing **prop drilling with global state management**, and applying correct **React Hooks dependency handling** (*useEffect, useCallback, useMemo*).
- Automated end-to-end testing workflows with **Playwright scripts**, significantly reducing QA dependency and improving application reliability.

Mantra labs | SOFTWARE ENGINEER   Bengaluru, India | Feb 2021 – Mar 2024

- Collaborated directly with the CEO and cross-functional teams to design and develop **a SaaS WebApp Builder** (similar to Webflow) leveraging **Next.js, React.js, TailwindCSS**, and the **open-source project Craft.js** boilerplate.
- Built **20+ draggable UI components** (e.g., Container, Text, Button) and advanced elements like Slider, NavBar, Tabs, Accordion, Dropdown, improving **user experience and customization flexibility**.
- Integrated database collections with **RESTful APIs and GraphQL APIs**, allowing real-time data binding directly from the UI.
- Delivered a **solar energy platform** for GreenBrilliance, where customers could input home addresses, auto-fetch roof imagery, visualize virtual solar panel installations, and estimate yearly energy generation & ROI.

CSIR-NCL | PROJECT ASSISTANT - II   Pune, India | Oct 2019 – Nov 2020

- Conducted computational studies on 2D materials using **Molecular Dynamics simulation**, leading to published **research paper**.

SKILLS

Languages: JavaScript, TypeScript
Frameworks: React, Redux, CraftJS, NextJS, Zustand, HTML, CSS
Tools: TailwindCSS, Playwright, JEST, RTL, AJAX, Git, Jenkin,
Other Skills: Problem Solving, Complexity Analysis, Troubleshoot, Debugging, Communication, Banking domain, SaaS

NOTABLES AND ACHIEVEMENT

- Recognized in Spot (Team) and Best Team category by TCS (09/2025)
- Star of the Month (04/2022) for contribution in WebMagic (SaaS product). [Link]
- Star of the Month (08/2023) Frontend development contribution to Green Brilliance CRM Portal[Link]
- Authored the paper Enhanced Photocatalytic Properties of Chemically Modified Blue Phosphorene, advancing ecofriendly fuel research.

EDUCATION

MSc in Computational Physics   Bathinda, Punjab, India | July 2016 - June 2018
Central University of Punjab, 2024