

SAM PREM KUMAR THALLA

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github.com/sampremm — [portfolio](#) — linkedin.com/in/samprem1

SKILLS

Languages: Java, JavaScript

Technologies & Tools: Node.js, React.js, Express.js, TailwindCSS, MySQL, MongoDB, PostgreSQL, Git, GitHub, Postman, Docker

EDUCATION

B.Tech in Electrical and Electronics Engineering

Jyothishmathi Institute of Technology and Science

July 2019 – Dec 2022 CGPA: 6.56

Diploma in Electrical and Electronics Engineering

Jyothishmathi Institute of Technological and Sciences

June 2016 – June 2019 CGPA: 7.21

PROJECTS

- **StreamYard Clone** — *Node.js, Express.js, Socket.IO, FFmpeg, Docker* — [Repo Link](#)
Developed a real-time streaming application similar to StreamYard, enabling users to stream live video with minimal latency.
 - Integrated **FFmpeg** for encoding and streaming video content in real time, utilizing an **RTMP server**.
 - Utilized **Socket.IO** for seamless communication between clients, handling real-time transmission of video data.
 - Containerized the application using **Docker**, streamlining deployment and scaling.
 - Implemented robust error handling for stream stability and process management.
- **Blogging Platform** — *Node.js, Express.js, MongoDB, React.js, TailwindCSS* — [Repo Link](#)
Developed a blogging platform enabling users to create, edit, and delete posts with a secure JWT-based authentication system. Created a responsive front-end with React.js and TailwindCSS, integrating Markdown for rich text formatting and using Mongoose for database schema modeling.
 - Implemented data validation and used custom error handling for better user experience.
- **Chess Application** — *HTML, CSS, JavaScript, TailwindCSS, Node.js, Express.js, WebSocket* — [Repo Link](#)
Built an interactive chess game supporting drag-and-drop moves and real-time updates through WebSocket. Designed to allow spectators to observe matches, enhancing user engagement.
 - Performed unit tests for game mechanics, ensuring accurate behavior.
 - Used REST APIs for user authentication and data storage.
- **Multithreaded Web Server** — *Java, Socket Programming, Multithreading* — [Repo Link](#)
Developed a web server using multithreading in Java to handle multiple client requests simultaneously. Employed socket programming for efficient communication and thread pooling for resource management.
 - Implemented logging for tracking requests, responses, and debugging purposes.
 - Focused on thread safety and best practices in concurrent programming.

ACHIEVEMENTS

- **Detection and Tracking MPPT Using CSA MPPT**
Published a journal article titled "Detection and Tracking Maximum Power Point of a PV System under Partial Shading Conditions using Cuckoo Search Algorithm (CSA) MPPT" in the International Journal of Research ([ISSN: 2236-6124](#)).
Enhanced energy efficiency in photovoltaic systems using CSA for Maximum Power Point Tracking (MPPT).

CERTIFICATIONS

- **Data Structures and Backend with Java** — **Board Infinity** — [Link](#)
Completed a comprehensive course on Data Structures and Backend development using Java, focusing on algorithmic problem-solving and RESTful web services.
- **HTML, CSS, JavaScript Certification** — **Johns Hopkins University** — [Link](#)
Acquired certification in web development fundamentals and modern design practices.