Shailendra Shukla

✉ shailendra.iiitsm@gmail.com   ⌗ github.com/shailendra-iiitm   ☎ +91 86044 34817   in linkedin.com/in/shailendra-shukla

Objective

Aspiring Software Development Engineer passionate about building scalable and efficient solutions. Seeking Internship and full-time opportunities in software engineering, full-stack development. Actively exploring AI, IoT, Deep Learning to broaden technical impact and innovation.

Education

Indian Institute of Information Technology, Senapati, Manipur   November 2022 - June 2026
Bachelor of Technology in Electronics and Communication Engineering   CPI: 8.07/10
Little Flower School, Harraiya, Basti, Uttar Pradesh   June 2019 - June 2021
Higher Secondary: 81.4%   Secondary: 92.4%

Coursework

Data Structures, Design & Analysis of Algorithms, Object-Oriented Programming, Operating Systems, Internet of Things, Database Management Systems, Computer Organization & Architecture, Communication Networks, Fundamentals of Artificial Intelligence, Fundamentals of Deep Learning

Projects

Guidely – Full-Stack Platform Connecting Guides with Potential Learners   guidely-edu.vercel.app
- Built a scalable mentorship platform using **React (Vite)**, **Tailwind CSS**, and **Node.js (Express)** with role-based auth.
- Implemented real-time booking logic, availability management, session scheduling, and secure sign-up/sign-in.
- Integrated **Razorpay** for seamless payment processing and created dashboards for guides and learners with dynamic service management.
- Utilized protected routes, session tokens, and custom middleware to enforce role-based access and secure API endpoints.

ScribbleNSense – AI-Powered Visual and Math Problem Solver   scribble-n-sense.vercel.app
- Developed a full-stack application using **React (Vite)** frontend and **FastAPI** backend to process handwritten input from an HTML canvas.
- Used **Gemini Vision API** to extract and classify content from base64 canvas images for both mathematical and abstract reasoning problems.
- Implemented **MathJax** for rendering LaTeX-based expressions and **draggable component-based** UI for viewing step-wise solutions.
- Handled CORS, async I/O, and REST API routing in FastAPI; used PIL for image decoding and planned OpenCV-based handwriting preprocessing.

Experience

Indian Institute of Technology Ropar, Punjab   June 2024 - July 2024
Summer Research Intern, Communication Research Laboratory

- Developed and simulated advanced Medium Access Control (MAC) protocols, including a novel CSMA/CA-based protocol tailored for Next Gen Wireless Communication,with enhanced collision handling mechanisms using C++,and MATLAB.
- Engineered an Instantaneous Channel Quality-Aware MAC protocol leveraging Rayleigh fading to adaptively manage node movement during data transmission, improving communication reliability.
- Conducted comprehensive performance evaluations comparing theoretical and simulated Bit Error Rates (BER) across AWGN and Rayleigh-fading simulated wireless channel environments.Utilized C++ and simulation tools to validate protocol functionality and analyze performance, contributing to refinement of wireless communication strategies.

Center for Development of Advanced Computing (C-DAC), Noida   May 2024 - June 2024
Internship in Ethical Hacking and Penetration Testing

- Conducted vulnerability assessments using banner grabbing to identify insecure web servers.
- Developed secure Apache banner scripts with advanced headers and access controls.
- Utilized Telnet, Nmap, and curl for comprehensive vulnerability scanning and network analysis.
- Mastered practical applications such as Nuclei for automating vulnerability scans and detecting keyloggers.

Skills

Languages: C/C++, JavaScript (ES6+), Python, MATLAB, SQL, HDL, LaTeX

Web & Frameworks: React, Node.js, Express.js, MongoDB, HTML5,Tailwind CSS, REST APIs

Tools & DevOps: Git, GitHub, Postman, VS Code, Shell Scripting, Netlify, Render, Vercel

Other Skills: Cadence Design Tools, Arduino, Nmap, Matlab, Team Collaboration, Problem Solving

Certifications

- Full Stack Web Development – PW Skills
- Internet of Things – IIT Kharagpur (SWAYAM)
- Deep Learning – IIT Kharagpur (SWAYAM)
- Artificial Intelligence – IIT Guwahati (SWAYAM)
- Arduino, Git, Perl, Scilab – IIT Bombay (Spoken Tutorials)