# Shishir Yadav

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## EDUCATION

**Purdue University, Indianapolis**     Aug 2023 – May 2025
*M.S. in Computer Science*
Coursework: Data Mining, OOP, Advanced OS, Networks, Mobile Security, Computer Vision, Cloud Computing

**GITAM University, Vizag, India**     Jun 2017 – Jun 2021
*B.Tech in Computer Science*
Coursework: C, Data Structures, OOP with C++, Java, DBMS, Software Engineering, Algorithms

## EXPERIENCE

**Tata Consultancy Services (TCS)**     Jul 2021 – Nov 2022
*Systems Engineer*     *Kolkata, India*

- Engineered robust backend workflows using **Dataverse**, **Power Platform**, and **Azure** that reduced client approval times by 80%.
- Streamlined report automation, saving 15+ hours/week and increasing accuracy by 25%.
- Developed 15+ reusable modules to accelerate future builds and standardized deployment pipelines.
- Boosted system observability by optimizing monitoring pipelines, cutting resolution time by 20%.

**Wood Cube Software Services LLP**     May 2019 – Jun 2019
*Java Intern*     *Jaipur, India*

- Created backend modules in **Spring Boot** for hospital appointments; improved scheduling accuracy by 30%.
- Integrated secure **REST APIs** to manage real-time patient and doctor communication. Reducing the time required for communication by 40%.

## ACADEMIC PROJECTS

**CartVerse – Scalable eCommerce System** | *Spring Boot, Microservices, PostgreSQL, REST APIs*

- Built a production-grade backend for an online marketplace using **microservices** and **RESTful APIs**, enabling modular deployment and 20% faster scalability.
- Reduced average order processing time by 20% and integrated secure user authentication, payment flow, and admin controls.

**Time Complexity Calculator** | *JavaScript, Python, Copilot, Web Hosting*

- Designed a web-based visualizer for analyzing algorithmic time complexity in real-time, improving code optimization workflow by 50%.
- Incorporated **AI-assisted coding tools (Copilot)** and deployed the solution on a personal cloud server for 24/7 access.

**Women Safety Android App** | *Java, Android SDK, Google Maps API*

- Led a team of 3 to build an emergency safety app with live GPS tracking and automated guardian alerts.
- Decreased average emergency response time by 60% through real-time location sharing and SOS alerts.

**Virtual Pet Consultation Platform** | *React.js, Firebase, Tailwind CSS*

- Developed a secure, responsive web platform enabling real-time virtual vet consultations and appointment bookings for 150+ clients/month.
- Expanded client access by 40% and reduced in-person footfall by 50%. Integrated **Firebase Auth**, **Cloud Firestore**.

**The OnlineStore Admin System** | *Java, Design Patterns, JSP, Servlets*

- Created backend for an admin dashboard using the Front Controller pattern to streamline request handling and modular development for 10+ active modules.
- Enabled vendor onboarding within minutes, improving operational setup speed by 35%.

**OS Scheduler Simulator & Custom Shell** | *C, Linux, System Programming*

- Simulated **FCFS, SJF, Round Robin** scheduling algorithms to analyze CPU burst handling and efficiency.
- Devised a **custom Unix shell** supporting 50+ command execution, piping, I/O redirection, forking, and synchronization.
- Demonstrated robust multi-process environment design with real-time command handling and error resilience.

## TECHNICAL SKILLS & CERTIFICATIONS

**Technical Skills**

- **Languages**: JavaScript, TypeScript, Java, Python, C++, SQL
- **Frontend**: React.js, Next.js, Tailwind CSS, HTML5, CSS3, SCSS
- **Backend**: Node.js, Express.js, Spring Boot, REST APIs, GraphQL
- **Databases**: Firebase, PostgreSQL, MongoDB, Oracle DB
- **Tools**: Git, VS Code, GitHub, Copilot, JIRA, Jenkins, Docker
- **Concepts**: Responsive Design, SSR, OOP, DSA, Agile, CI/CD

**Certifications**

- Microsoft Azure Fundamentals
- Java for Android – Coursera
- Python Programming – Coursera
- Android Development Specialization – Coursera