

# Tamalampudi Sameer Reddy

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## PROFESSIONAL SUMMARY

Software Development Engineer with strong CS fundamentals in Data Structures, Algorithms, and OOP, applied to building scalable, maintainable software. Proficient in C++, Python, and JavaScript/TypeScript, with hands-on REST API, SQL/NoSQL, Git, and CI/CD experience across the full SDLC in Agile teams.

## TECHNICAL SKILLS

**Languages:** C++, C, Python, SQL, JavaScript, TypeScript

**CS Fundamentals:** Data Structures, Algorithms, Object-Oriented Programming (OOP), Problem Solving, SDLC

**Backend & APIs:** REST APIs, Node.js, Express.js, JWT Authentication, RBAC, MongoDB, SQL

**Testing & Practices:** Testing, Debugging, Agile, Code Review, Scalability, Maintainability

**DevOps & Cloud:** Git, CI/CD (GitHub Actions), Docker, Azure App Service, Linux

**Frontend:** React.js, HTML, CSS, Bootstrap 5, Tailwind CSS, Responsive Design

**Data & Tools:** Pandas, NumPy, Regex, VS Code, Postman

## EXPERIENCE

### Software Development Engineer Intern | INSA Summer Research Fellow | IIT Ropar

May 2025 – Jul 2025

Project: LearnFlow | Mentor: Dr. Sudarshan Iyengar, Assoc. Prof. CSE

- Designed and maintained RESTful API integrations between the React frontend and MongoDB backend, reducing average API response time by 20% through targeted query optimisation for scalability.
- Co-built a Python synthetic-learner simulator to evaluate recommendation-engine accuracy using Pandas and NumPy, applying algorithmic and data-driven analysis to improve model precision by 18%.
- Re-architected the LearnFlow frontend in React.js and Bootstrap 5 with component-level refactoring and responsive layouts, improving usability scores by 25% and cutting average page load time by 30%.
- Engineered a CSS custom-property dark-mode theming system, boosting WCAG accessibility compliance and increasing average user session duration by 15%.

## PROJECTS

### CampusGate – Smart Gate Pass Management System

[Live Demo](#) | Feb 2026

React | Node.js | Express | MongoDB | Tailwind CSS | Azure | CI/CD | Github

- Architected a scalable multi-role platform (Student, Warden, Watchman, Parent, Admin) with JWT authentication and RBAC, applying object-oriented design to digitise secure gate-pass workflows for 500+ students across 3 hostels.
- Implemented dynamic QR code generation and a real-time scanner verification algorithm, reducing gate-pass processing time by 80% and eliminating all manual paper-based approvals.
- Deployed to Azure App Service via a GitHub Actions CI/CD pipeline achieving 99.9% uptime; Recharts dashboards cut admin reporting time by 60%.

### Automated Daily Horoscope Bot

Jan 2026

Python | BeautifulSoup | Telegram Bot API | Docker | Pillow

- Engineered a content automation pipeline in Python with BeautifulSoup to crawl, evaluate, and extract web data, replacing 2 hours of daily manual effort.
- Applied Regular Expressions (Regex) and logic-driven filtering to curate relevant URLs and content, ensuring accurate, high-quality updates for a 2,000+ subscriber channel.
- Containerised the workflow with Docker on a Linux VPS with cron scheduling, achieving 100% delivery consistency and maintaining detailed execution logs.

## EDUCATION

### Indian Institute of Information Technology, Manipur

2022 – 2026 | CGPA: 6.65

Bachelor of Technology in Computer Science and Engineering (B.Tech CSE)

### Tirumala Junior College, Rajahmundry

2020 – 2022 | 74%

Class XII – Mathematics, Physics, Chemistry (BIE, Andhra Pradesh)

### Sri Siddhartha EM High School, Ravulapalem

2019 – 2020 | 76%

Class X (BSE, Andhra Pradesh)

## CERTIFICATIONS & ACHIEVEMENTS

**MongoDB Associate Developer** – Certified by MongoDB University, validating proficiency in MongoDB database operations, query execution and full-stack integration. [\[View Certificate\]](#)

**Data Analytics with Python** – NPTEL certified by IIT Roorkee, demonstrating proficiency in data science pipelines, Pandas, NumPy and statistical algorithms. [\[View Certificate\]](#)