

# KOUSHIK CHALLA

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B.Tech CSE • SRM University AP • Expected Graduation: 2028 • Systems & Software Developer

## EDUCATION

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### B.Tech, Computer Science Engineering — SRM University AP, Amaravati

2024 – 2028 (Present)

- Coursework: Data Structures & Algorithms, Object-Oriented Programming, Operating Systems, Computer Networks, DBMS, Algorithm Design & Analysis, Gen AI, Machine Learning Basics
- Active participant in coding challenges, competitive programming sessions, and peer programming groups.
- Grade: 9.12/10.00

### Intermediate (Class XII) — Sri Viveka Junior College, Kandukur

2022 – 2024

- Scored 984/1000 (98.4%) — ranked among top performers in the batch.

### Secondary School (Class X) — Sri Chaitanya Techno High School

Passed 2022

- Scored 569/600 (94.8%).

## TECHNICAL SKILLS

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**Languages:** C, C++ (primary), Python, JavaScript, SQL

**Web / Full-Stack:** React.js, Node.js, Express.js, HTML5, CSS3, Responsive Design

**Databases:** MySQL, SQL (DDL/DML/Joins/Aggregations), DBMS concepts (normalization, indexing, transactions), MongoDB

**Core CS:** Data Structures & Algorithms, Algorithm Design, Greedy Methods, Stack/Queue/Tree Operations, Expression Parsing

**Systems & Tools:** Memory management, File I/O (binary & text), Git & GitHub, VS Code

**Concepts:** Performance optimization, Problem Solving Thinking, System design fundamentals, Competitive programming, Low-latency thinking

## CERTIFICATIONS

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- Artificial Intelligence Foundation – Infosys Springboard 2026
- Applied Generative AI – Infosys Springboard. 2026
- MongoDB Certified Associate Developer – MongoDB 2026

## PROJECTS

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### Infix-to-Postfix Expression Evaluator with Stack Simulator | C++

2025

- Engineered a complete infix-to-postfix converter and expression evaluator in C++ using a custom stack data structure, correctly handling operator precedence, associativity, and nested parentheses.
- Implemented push/pop operations from scratch with  $O(n)$  time and  $O(n)$  space complexity; validated correctness against 20+ test expressions covering edge cases (unary operators, deeply nested expressions).
- Built a GUI-based stack animation in C++ to visualise each push/pop step in real time — demonstrating deep understanding of stack mechanics and parsing algorithms.

Link: [github.com/challa-koushik/infix\\_to\\_postfix\\_sim](https://github.com/challa-koushik/infix_to_postfix_sim)

### Mini Social Network — Console Application | C

2024

- Built a 1,200+ line, fully functional social network in C with user authentication, session management, friend-request workflows (send/accept/reject), and a public message board — using zero external libraries.
- Designed modular architecture decoupling authentication, friend-graph, and feed logic into distinct function groups, reducing per-module code size by ~40% and enabling isolated debugging.
- Implemented binary + text file persistence handling edge cases including duplicate registrations, invalid email formats, and corrupted file reads — mirroring real-world fault-tolerant system design.

Link: [github.com/challa-koushik/mini-social-network](https://github.com/challa-koushik/mini-social-network)

### Dynamic Ride-Sharing Allocation Engine | C + Web Frontend

2025

- Designed and implemented a ride-matching engine in C using a greedy nearest-neighbor algorithm to optimally pair drivers with riders, reducing average simulated wait time by ~30% versus naive sequential assignment.
- Engineered dynamic fare calculation with distance and demand multipliers; stress-tested allocation logic against edge conditions including zero available drivers and surge-demand scenarios.
- Built a React-inspired HTML/CSS/JS frontend prototype to visualise live driver-rider status and allocation state — bridging systems logic with interactive UI.

Link: [github.com/challa-koushik/Ride\\_Sharing\\_App](https://github.com/challa-koushik/Ride_Sharing_App)

## Personal Portfolio Website | HTML · CSS · JavaScript

2025

- Developed a fully responsive, performance-optimized portfolio site with smooth-scroll navigation, animated sections, project filtering, and a cursor-reactive profile image effect.
- Implemented a custom CSS mask conic-gradient ring tracking cursor position in real time using requestAnimationFrame lerp — a zero-library interactive effect built from first principles.
- Achieved clean Google Lighthouse scores with semantic HTML and WCAG-compliant accessible colour contrast; deployed on GitHub Pages.

Link: [challa-koushik.github.io/Portfolio](https://challa-koushik.github.io/Portfolio)

## EXPERIENCE

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### Web Development Intern — ShadowFox

2026

- Delivered three front-end projects: a personal portfolio, an IPL-themed fan site, and supplementary HTML/CSS/JS UI components — all version-controlled and published on GitHub.
- Strengthened skills in responsive layout, semantic HTML, JavaScript DOM manipulation, and cross-browser compatibility through iterative client feedback cycles.

### Incoming Intern (Expected) — Infosys Springboard (AI / Generative AI Track)

2026

- Selected for AI-focused internship program (expected start May 2026)

## ACHIEVEMENTS & STRENGTHS

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- Intermediate score of 984/1000 (98.4%) — consistently top-tier academic performer across two institutions.
- Comfortable solving Data Structures & Algorithms problems involving arrays, linked lists, stacks, queues, trees, and sorting/searching algorithms; actively practising on competitive programming platforms.
- Self-taught C file I/O, React.js, Node.js, and SQL within the first year of university — demonstrates rapid independent learning under no formal instruction.
- Maintains consistent version-control discipline (Git/GitHub) and project documentation across 6+ public repositories — a practice valued in high-performance engineering teams.