

# Akshat Yadav

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## TECHNICAL SKILLS

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JavaScript (ES6+), TypeScript, React.js, Node.js, Express.js, MongoDB, PostgreSQL, RESTful APIs, Redux, HTML5, CSS3, Tailwind CSS, Bootstrap, C++, Python, Flask, Fast API, JWT Authentication, CI/CD

## PROJECTS

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- PACER Quest** | MERN Stack, JWT Auth, Performance Optimization *Mar 2025*
- Engineered full-stack flashcard and topic based quiz generation application serving students and educators based on React frontend and Node.js/Express REST API
  - Architected MongoDB schemas with indexing, reducing query times by 40% for user progress tracking
  - Secured application with JWT authentication implementing refresh tokens and protected routes
  - Boosted rendering performance by 60% through React virtualization techniques for large datasets
- One Editor** | Next.js 15, TypeScript, Node.js, MongoDB, Tailwind CSS *Nov 2024*
- Spearheaded development of full-stack web application with online editor supporting 10,000+ monthly users accessing simultaneously
  - Streamlined form handling by implementing React Hook Form with Zod validation, reducing errors by 35%
  - Designed scalable backend APIs processing 100+ requests/minute with Node.js and MongoDB
  - Pioneered reusable component library using Shadcn UI and Tailwind CSS, accelerating development by 25%
- PocketFlow Tutorial Framework** | Python, Flask, LLM APIs *Aug 2023*
- Established open-source framework converting LLM codebases into tutorials, adopted by developers
  - Innovated modular architecture supporting 5+ LLM frameworks, increasing compatibility by 70%
  - Automated tutorial generation system producing 50+ learning resources monthly
  - Cultivated GitHub community with 15+ contributors through effective workflows and documentation

## EXTRACURRICULAR ACTIVITIES

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- Research Publications** | Quantum Computing, Black Hole Physics
- Published novel paper on "Information Paradox Resolution Through Quantum Geometry" with 200+ reads
  - Researched and authored comprehensive guide on "Quantum Computing: Foundations, Technologies, and Applications"
- Open Source Contributions** | GirlScript Summer of Code
- Championed contributions to 10+ projects, delivering 1,000+ lines of optimized code
  - Resolved 15+ critical issues through strategic pull requests and code reviews
- Technical Leadership** | PI Mathematics Club, VIT Bhopal
- Orchestrated coding competitions and math workshops engaging 100+ participants
  - Mentored 20+ junior students in advanced mathematics and algorithm design
- Innovation enthusiast** | Smart India Hackathon
- Secured college finals placement, outperforming 150+ competing teams with innovative solutions.
  - Pioneered AI-powered questionnaire based mental health diagnostic app prototype with 85% accuracy

## CERTIFICATIONS

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- MERN Stack Specialist** – Ethnus | Architecture, Performance, Security *Apr 2025*
- Web Development Mastery** – IBM/Coursera | Modern JavaScript, Responsive Design *Jun 2024*

## EDUCATION

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- VIT Bhopal University** Bhopal, MP  
*Bachelor of Technology in Computer Science and Engineering – CGPA: 8.55* *Nov 2022 – Present*
- Maharana Pratap Education Centre** Kanpur, UP  
*Senior Secondary (12<sup>th</sup>) – 89%* *May 2021*
- Maharana Pratap Education Centre** Kanpur, UP  
*High School (10<sup>th</sup>) – 96.6%* *Jul 2019*