VAASU BISHT

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EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2026 (expected)	5-year Integrated M.Tech (CSE)	Vellore Institute of Technology, Bhopal	9.07
2020	AISSCE (CBSE- Class XII Boards)	Delhi Public School Indirapuram	85.5 %
2018	AISSE (CBSE- Class X Boards)	Delhi Public School Indirapuram	88.8 %

WORK EXPERIENCE

Head of Technology @ Stealth Startup　　　　　　　　　　　　　　　　　　　　　**Dec '23 - Sept '24**
Software Development Team　　　　　　　　　　　　　　　　　　　　　　　　　　　　*Remote*
- Directed the technical architecture and system design for a privacy-focused encrypted mailing and storage startup.
- Implemented scalable microservices with gRPC communication, secure encryption protocols, and distributed storage systems.

Intern @ i3 Digital Health Private Limited　　　　　　　　　　　　　　　　　　　　**Dec '22 - July '23**
Technology and Data Science Team　　　　　　　　　　　　　　　　　　　　　　　　　*Remote*
- Led the backend development of a healthcare product, collaborating with frontend developers and oncology experts to build a platform that provides doctors with easy access to the latest advancements in cancer biology.
- Handled eventual consistency issues arising from the implementation of third-party authentication.
- Debugged the existing code base to optimize database queries for better performance.
- Developed and deployed various ETL pipelines on AWS.
- Used AWS Step Functions for **30%** faster, **20%** cheaper distributed data processing with S3 and Lambda.

PROJECTS

Predicta: The prediction market
A highly scalable opinion trading platform build by integrated 6 microservices
- Optimized platform performance by integrating Redis for high-speed user session management **(99.9% uptime)**, real-time order book matching, and dynamic price tracking, reducing response times by **60%**.
- Engineered event-driven communication using RabbitMQ, decoupling services and improving fault tolerance, while implementing database-per-service patterns (PostgreSQL, MongoDB) to isolate data domains and streamline queries.
- Integrated redis pub-sub with websocket to enable instant price broadcasting, achieving **<100ms** end-to-end latency.
- Designed and implemented a Saga orchestrator from scratch to manage distributed and complex workflow to ensuring consistency.

AquaInsights: API as a Service for Real-time Water Quality
Developed a cost-effective water quality monitoring solution using satellite imagery for Bhopal region
- Utilized satellite imagery and GIS techniques to collect and analyze data from multiple lakes in the Bhopal region.
- Developed standardized data collection formulations and transformed them into a data pipeline, integrating diverse satellite data sources.
- Developed a data-fetching API using **node.js(typescript)** added API key to verify and manage user access.
- Created a web application using Next.js which implemented user authentication so user can access data using API .

3x3 Rubik's Cube Cracker
A project to showcase my Object Oriented Programming(OOPs) and Data Structure and Algorithm(DSA) skills
- Modeled a virtual Rubik's Cube into 3 difference models/classe using stadnard data structures present in C++
- Achieved a solve time of under **3sec** for Rubik's cube jumbled 8 times using BFS, DFS and IDDFS algorithms.
- Implemented Korf's IDA* Algorithm to achieve a solve time of under **11sec** for a Rubik's Cube jumbled 13 times.

AWARDS AND ACHIEVEMENTS

- **Cloud computing(NPTEL)**- Ranked among the top **30** out of **33,000+** participants,including students and professionals.

SKILLS AND EXPERTISE

- **Languages -** *Proficient :* C++, Java, Python | *Intermediate :* SQL, JavaScript, TypeScript, Bash | *Familiar :* Go
- **Technologies and Frameworks-** Node.js, Spring Boot, Docker, Redis, RabbitMQ, MongoDB, PostgreSQL, Amazon Web Services, React.js, Next.js
- **Others-** Microservices, ACID Transactions, REST, Sequelize, Prisma

POSITIONS OF RESPONSIBILITY

Founder and Lead @ Omdena VIT Bhopal Chapter (2023-2024)
- Lead and managed three projects with collaborators from 40+ time zones. to develop innovative solutions to real-world challenges
- Representing college on a project with Omdena Algeria Chapter and multiple Algeria Universities.